EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	38	(isoflavone or kudzu or soy or legumes or alfalfa or clover or licorice) same (curcumin or rosemary or resveratrol) same (choline or trimethylglycine or cobalamin or "folic acid" or riboflavin or pyridoxine or magnesium) same flavonoid	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/11/21 07:36
L2	38	(isoflavone or kudzu or soy or legumes or alfalfa or clover or licorice) same (curcumin or courcumin or rosemary or resveratrol) same (choline or trimethylglycine or cobalamin or "folic acid" or riboflavin or pyridoxine or magnesium) same flavonoid	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/11/21 09:21
L3	2	("20060024385").PN.	US-PGPUB; USPAT; DERWENT	OR	OFF	2006/11/21 08:56
L4	2	("20060239928").PN.	US-PGPUB; USPAT; DERWENT	OR	OFF	2006/11/21 08:56
L5	15	(isoflavone or kudzu or soy or legumes or alfalfa or clover or licorice) same (curcumin or courcumin or rosemary or resveratrol) same (choline or trimethylglycine or cobalamin or "folic acid" or riboflavin or pyridoxine or magnesium) same (flavonol or flavanone)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/11/21 08:58
L6	2	L5 not L2	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/11/21 09:21
L7	304	isoflavone same (quercetin or chrysin or hesperidin)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/11/21 09:22
L8	34	isoflavone same (quercetin or chrysin or hesperidin).clm.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/11/21 09:22

EAST Search History

S34	44	(isoflavone same (kudzu or soy or legumes or alfalfa or clover or licorice)) same (curcumin or rosemary or resveratrol) same (choline or trimethylglycine or cobalamin or "folic acid" or riboflavin or pyridoxine or magnesium)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/11/15 15:19
S35	34	S34 same composition	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/11/15 14:47
S36	2	(isoflavone same (kudzu or soy or legumes or alfalfa or clover or licorice)) same (curcumin or rosemary or resveratrol) same (choline or trimethylglycine or cobalamin or "folic acid" or riboflavin or pyridoxine or magnesium) same (carotenoid) same flavonoid	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/11/20 13:50
S37	2	(isoflavone with (kudzu or soy or legumes or alfalfa or clover or licorice)) same (curcumin or rosemary or resveratrol) same (choline or trimethylglycine or cobalamin or "folic acid" or riboflavin or pyridoxine or magnesium) same (carotenoid) same flavonoid	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/11/21 07:34
S38	2	(isoflavone with (kudzu or soy or legumes or alfalfa or clover or licorice)) same (curcumin or rosemary or resveratrol) same (choline or trimethylglycine or cobalamin or "folic acid" or riboflavin or pyridoxine or magnesium) same (lutein or zeaxanthin or beta-carotene or lycopene) same (quercetin or chrysin or hesperidin)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/11/15 15:16
S39	44	((isoflavone or phytoestrogen) same (kudzu or soy or legumes or alfalfa or clover or licorice)) same (curcumin or rosemary or resveratrol) same (choline or trimethylglycine or cobalamin or "folic acid" or riboflavin or pyridoxine or magnesium)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/11/20 09:40

EAST Search History

S40	5	((isoflavone or phytoestrogen) same (kudzu)) same (curcumin or rosemary or resveratrol) same (choline or trimethylglycine or cobalamin or "folic acid" or riboflavin or pyridoxine or magnesium)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/11/17 08:55
S41	5	((isoflavone or phytoestrogen) same (kudzu or "peuraria lobata")) same (curcumin or rosemary or resveratrol) same (choline or trimethylglycine or cobalamin or "folic acid" or riboflavin or pyridoxine or magnesium)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/11/17 08:56
S42	1144	bland.in.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/11/20 08:19
S43	8	S42 and isoflavone	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/11/20 08:19
S44	8	(kudzu or clover) same (curcumin or rosemary or resveratrol) same (choline or trimethylglycine or cobalamin or "folic acid" or riboflavin or pyridoxine or magnesium) and chrysin	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/11/20 09:42
S45	8	(kudzu or "trifolium pretense" or "pueraria lobata" or clover) same (curcumin or rosemary or resveratrol) same (choline or trimethylglycine or cobalamin or "folic acid" or riboflavin or pyridoxine or magnesium) and chrysin	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/11/20 09:44
S46	15	(kudzu or "trifolium pretense" or "pueraria lobata" or clover) same (curcumin or rosemary or resveratrol) same (choline or trimethylglycine or cobalamin or "folic acid" or riboflavin or pyridoxine or magnesium) and (chrysin or quercetin or hesperidin)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/11/20 09:55
S47	30	(kudzu or "trifolium pretense" or "pueraria lobata" or clover) same menopause	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/11/20 09:56

EAST Search History

S48	101	(kudzu or "trifolium pretense" or soy) same menopause	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/11/20 09:56
S49	50	(kudzu or "trifolium pretense" or soy) with menopause	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/11/20 09:57
S50	0	((kudzu or "trifolium pretense") and soy) with menopause	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/11/20 09:57
S51	1	((kudzu or "trifolium pretense") and soy) same menopause	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/11/20 10:26
S52	1	((kudzu or "pueraria lobata") and soy) same menopause	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/11/20 13:49
S53	290	provera	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/11/20 13:49
S54	5	provera.clm.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/11/20 13:49
S55	8	(isoflavone same (kudzu or soy or legumes or alfalfa or clover or licorice)) same (curcumin or rosemary or resveratrol) same (choline or trimethylglycine or cobalamin or "folic acid" or riboflavin or pyridoxine or magnesium) same (quercetin or chrysin or hesperidin)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/11/20 13:52
S56	41	(isoflavone same (kudzu or soy or legumes or alfalfa or clover or licorice)) and (curcumin or rosemary or resveratrol) and (choline or trimethylglycine or cobalamin or "folic acid" or riboflavin or pyridoxine or magnesium) and (quercetin or chrysin or hesperidin)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/11/20 14:25

EAST Search History

S57	104	(isoflavone) and (curcumin or rosemary or resveratrol) and (choline or trimethylglycine or cobalamin or "folic acid" or riboflavin or pyridoxine or magnesium) and (quercetin or chrysin or hesperidin)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/11/20 15:06
S58	63	S57 not S56	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/11/20 14:27
S59	41	Lukaczer.in.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/11/20 15:06
S60	8	S59 and isoflavone	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/11/20 15:06
S61	5	S59 and menopause	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/11/20 15:06

Logon

*** It is now 11/20/06 8:29:03 AM ***

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10/735,526

New on Dialog
Enhanced Derwent World Patents Index Now Available

The enhanced *Derwent World Patents Index*® (*DWPI*SM) (Files 350,351,352) is now available on Dialog. The improvements implemented in *DWPI* on Dialog further extend the database's rich content set and enhances overall functionality of the database.

In addition to distilled expert analysis reflected in *DWPI* expanded titles and abstracts, other enhancements include original patent filing details, multiple patent images, easy cut-and-paste patent family data, and much more.

The new templates include new features that will help you manage and distribute your *DWPI* search results in an attractive format.

Learn about all of the new DWPI enhancements and report templates at http://www.dialog.com/dwpi.

DialogLink 5 Release Notes
New features available in the latest release of DialogLink 5 (November 2005)

- Ability to resize images for easier incorporation into DialogLink Reports
- New settings allow users to be prompted to save Dialog search sessions in the format of their choice (Microsoft Word, RTF, PDF, HTML, or TEXT)
- Ability to set up Dialog Alerts by Chemical Structures and the addition of Index Chemicus as a structure searchable database
- Support for connections to STN Germany and STN Japan services

Show Preferences for details

? Help Log On Msg

*** ANNOUNCEMENTS ***

***

NEW FILES RELEASED

***Engineering Index Backfile (File 988)

***Verdict Market Research (File 769)

***EMCare (File 45)

***Trademarkscan - South Korea (File 655)

RESUMED UPDATING

***File 141, Reader's Guide Abstracts

***

RELOADS COMPLETED

***Files 173 & 973, Adis Clinical Trials Insight

***File 11, PsycInfo

***File 531, American Business Directory

*** The 2005 reload of the CLAIMS files (Files 340, 341, 942)
is now available online.

***

DATABASES REMOVED

***File 196, FINDEX

***File 468, Public Opinion Online (POLL)

Chemical Structure Searching now available in Prous Science Drug
Data Report (F452), Prous Science Drugs of the Future (F453),
IMS R&D Focus (F445/955), Pharmaprojects (F128/928), Beilstein
Facts (F390), Derwent Chemistry Resource (F355) and Index Chemicus
(File 302).

***

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? Help Off Line

* * *

Connecting to Suzanne Noakes - Dialog - 276629

```
Connected to Dialog via SMS00300


?  b 155 nutrit altmed foodsci biosci
>>>W:            44 is unauthorized
          76 is unauthorized
2 of the specified files are not available
```

[File 155] **MEDLINE(R)** 1950-2006/Nov 14
(c) format only 2006 Dialog. All rights reserved.
**File 155: NLM will not provide updates from November 16-20. Please see HELP NEWS 154 for details.*

[File 5] **Biosis Previews(R)** 1969-2006/Nov W2
(c) 2006 The Thomson Corporation. All rights reserved.

[File 10] **AGRICOLA** 70-2006/Nov
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[File 24] **CSA Life Sciences Abstracts** 1966-2006/Oct
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[File 34] **SciSearch(R) Cited Ref Sci** 1990-2006/Nov W2
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[File 35] **Dissertation Abs Online** 1861-2006/Oct
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[File 50] **CAB Abstracts** 1972-2006/Oct
(c) 2006 CAB International. All rights reserved.

[File 51] **Food Sci.&Tech.Abs** 1969-2006/Nov W3
(c) 2006 FSTA IFIS Publishing. All rights reserved.

[File 53] **FOODLINE(R): Science** 1972-2006/Nov 20
(c) 2006 LFRA. All rights reserved.

[File 65] **Inside Conferences** 1993-2006/Nov 17
(c) 2006 BLDSC all rts. reserv. All rights reserved.

[File 71] **ELSEVIER BIOBASE** 1994-2006/Nov W3
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[File 73] **EMBASE** 1974-2006/Nov 20
(c) 2006 Elsevier B.V. All rights reserved.

[File 79] **Foods Adlibra(TM)** 1974-2002/Apr
(c) 2002 General Mills. All rights reserved.
**File 79: This file is closed (no updates)*

[File 91] **MANTIS(TM)** 1880-2006/Jan
2001 (c) Action Potential. All rights reserved.

[File 94] **JICST-EPlus** 1985-2006/Aug W1
(c)2006 Japan Science and Tech Corp(JST). All rights reserved.

[File 98] **General Sci Abs** 1984-2006/Oct

[File 135] **NewsRx Weekly Reports** 1995-2006/Nov W2

[File 143] **Biol. & Agric. Index** 1983-2006/Sep

[File 144] **Pascal** 1973-2006/Oct W5

[File 149] **TGG Health&Wellness DB(SM)** 1976-2006/Nov W1

[File 156] **ToxFile** 1965-2006/Nov W1

[File 162] **Global Health** 1983-2006/Oct

[File 164] **Allied & Complementary Medicine** 1984-2006/Nov

[File 172] **EMBASE Alert** 2006/Nov 20

[File 203] **AGRIS** 1974-2006/Sep

[File 266] **FEDRIP** 2006/Aug

[File 399] **CA SEARCH(R)** 1967-2006/UD=14522

**File 399: Use is subject to the terms of your user/customer agreement. IPCR/8 classification codes now searchable as IC=. See HELP NEWSIPCR.*

[File 434] **SciSearch(R) Cited Ref Sci** 1974-1989/Dec

[File 444] **New England Journal of Med.** 1985-2006/Nov W1

[File 467] **ExtraMED(tm)** 2000/Dec

[File 45] **EMCare** 2006/Nov W2

[File 6] **NTIS** 1964-2006/Nov W1

[File 99] **Wilson Appl. Sci & Tech Abs** 1983-2006/Sep

[File 28] **Oceanic Abstracts** 1966-2006/Oct
(c) 2006 CSA. All rights reserved.

[File 40] **Enviroline(R)** 1975-2006/Oct
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[File 41] **Pollution Abstracts** 1966-2006/Oct
(c) 2006 CSA. All rights reserved.

[File 110] **WasteInfo** 1974-2002/Jul
(c) 2002 AEA Techn Env. All rights reserved.
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[File 136] **BioEngineering Abstracts** 1966-2006/Oct
(c) 2006 CSA. All rights reserved.

[File 185] **Zoological Record Online(R)** 1978-2006/Nov
(c) 2006 The Thomson Corp. All rights reserved.

[File 357] **Derwent Biotech Res.** _1982-2006/Nov W3
(c) 2006 The Thomson Corp. All rights reserved.

[File 369] **New Scientist** 1994-2006/Sep W2
(c) 2006 Reed Business Information Ltd. All rights reserved.

[File 370] **Science** 1996-1999/Jul W3
(c) 1999 AAAS. All rights reserved.
**File 370: This file is closed (no updates). Use File 47 for more current information.*

[File 391] **Beilstein Reactions** 2006/Q3
(c) 2006 Beilstein GmbH. All rights reserved.

```
? s (isoflavone(n60)(kudzu or soy or legumes or alfalfa or clover or
licorice))(N60)(curcumin or rosemary or resveratrol)(n60)(choline or trimethylglycine or
cobalamin or "folic acid" or riboflavin or pyridoxine or magnesium)

Processing

        28691   ISOFLAVONE

         2992   KUDZU

       125838   SOY

       229883   LEGUMES

       129326   ALFALFA

        97987   CLOVER

         9769   LICORICE

        17993   CURCUMIN

        13190   ROSEMARY
```

```
 18468   RESVERATROL
269053   CHOLINE
   445   TRIMETHYLGLYCINE
 24508   COBALAMIN
 69935   FOLIC ACID
 60849   RIBOFLAVIN
 53658   PYRIDOXINE
939916   MAGNESIUM
S1          1   S (ISOFLAVONE(N60)(KUDZU OR SOY OR LEGUMES OR ALFALFA OR CLOVER OR
LICORICE))(N60)(CURCUMIN OR ROSEMARY OR RESVERATROL)(N60)(CHOLINE OR TRIMETHYLGLYCINE OR
COBALAMIN OR "FOLIC ACID" OR RIBOFLAVIN OR PYRIDOXINE OR MAGNESIUM)

?  t s1/medium/1
```

1/2/1 (Item 1 from file: 45)
EMCare

01740843 EMCare No: 41291684

Clinical effects of a proprietary combination isoflavone nutritional supplement in menopausal women: A pilot trial

Lukaczer D.; Darland G.; Tripp M.; Liska D.; Lerman R.H.; Schiltz B.; Bland J.S.
Dr. D. Lukaczer, Department of Clinical Research, Functional Medicine Research Center, Gig Harbor, WA United States
Alternative Therapies in Health and Medicine (ALTERN. THER. HEALTH MED.) (United States) 2005 , 11/5 (60-65)
CODEN: ATHMF **ISSN:** 1078-6791
DOCUMENT TYPE: Journal ; Article
LANGUAGE: ENGLISH **SUMMARY LANGUAGE:** ENGLISH
NUMBER OF REFERENCES: 38
RECORD TYPE: Abstract


```
?  S (ISOFLAVONE(N90)(KUDZU OR SOY OR LEGUMES OR ALFALFA OR CLOVER OR
LICORICE))(N90)(CURCUMIN OR ROSEMARY OR RESVERATROL)(N90)(CHOLINE OR TRIMETHYLGLYCINE OR
COBALAMIN OR (FOLIC ACID) OR RIBOFLAVIN OR PYRIDOXINE OR MAGNESIUM)
 28691   ISOFLAVONE
  2992   KUDZU
125838   SOY
229883   LEGUMES
```

129326	ALFALFA
97987	CLOVER
9769	LICORICE
17993	CURCUMIN
13190	ROSEMARY
18468	RESVERATROL
269053	CHOLINE
445	TRIMETHYLGLYCINE
24508	COBALAMIN
69935	FOLIC ACID
60849	RIBOFLAVIN
53658	PYRIDOXINE
939916	MAGNESIUM

S2 1 S (ISOFLAVONE(N90)(KUDZU OR SOY OR LEGUMES OR ALFALFA OR CLOVER OR LICORICE))(N90)(CURCUMIN OR ROSEMARY OR RESVERATROL)(N90)(CHOLINE OR TRIMETHYLGLYCINE OR COBALAMIN OR (FOLIC ACID) OR RIBOFLAVIN OR PYRIDOXINE OR MAGNESIUM)

?

?

? s (isoflavone(N90)(kudzu or soy or legumes or alfalfa or clover or licorice))(n90)(curcumin or rosemary or resveratrol)(n90)(choline or trimethylglycine or cobalamin or (folic acid) or riboflavin or pyridoxine or magnesium)(n90)(carotenoid)(n90)(flavonoid)

28691	ISOFLAVONE
2992	KUDZU
125838	SOY
229883	LEGUMES
129326	ALFALFA
97987	CLOVER
9769	LICORICE
17993	CURCUMIN
13190	ROSEMARY
18468	RESVERATROL
269053	CHOLINE
445	TRIMETHYLGLYCINE

```
     24508   COBALAMIN
     69935   FOLIC ACID
     60849   RIBOFLAVIN
     53658   PYRIDOXINE
    939916   MAGNESIUM
     79625   CAROTENOID
     95820   FLAVONOID
S3        0   S (ISOFLAVONE(N90)(KUDZU OR SOY OR LEGUMES OR ALFALFA OR CLOVER OR
LICORICE))(N90)(CURCUMIN OR ROSEMARY OR RESVERATROL)(N90)(CHOLINE OR TRIMETHYLGLYCINE OR
COBALAMIN OR (FOLIC ACID) OR RIBOFLAVIN OR PYRIDOXINE OR
MAGNESIUM)(N90)(CAROTENOID)(N90)(FLAVONOID)

? s ((isoflavone or phytoestrogen) and (kudzu or soy or legumes or alfalfa or clover or
licorice)) and (curcumin or rosemary or resveratrol) and (choline or trimethylglycine or
cobalamin or (folic acid) or riboflavin or pyridoxine or magnesium)
     28691   ISOFLAVONE
     12771   PHYTOESTROGEN
      2992   KUDZU
    125838   SOY
    229883   LEGUMES
    129326   ALFALFA
     97987   CLOVER
      9769   LICORICE
     17993   CURCUMIN
     13190   ROSEMARY
     18468   RESVERATROL
    269053   CHOLINE
       445   TRIMETHYLGLYCINE
     24508   COBALAMIN
     69935   FOLIC ACID
     60849   RIBOFLAVIN
     53658   PYRIDOXINE
    939916   MAGNESIUM
S4        6   S ((ISOFLAVONE OR PHYTOESTROGEN) AND (KUDZU OR SOY OR LEGUMES OR ALFALFA
OR CLOVER OR LICORICE)) AND (CURCUMIN OR ROSEMARY OR RESVERATROL) AND (CHOLINE OR
TRIMETHYLGLYCINE OR COBALAMIN OR (FOLIC ACID) OR RIBOFLAVIN OR PYRIDOXINE OR MAGNESIUM)
```

```
? rd
>>>W: Duplicate detection is not supported for File 391.
Records from unsupported files will be retained in the RD set.
S5          5   RD  (UNIQUE ITEMS)

? r s5/medium/all
>>>E: Unrecognizable command

? t s5/medium/all
```

5/2/1 (Item 1 from file: 73)
Fulltext available through: USPTO Full Text Retrieval Options SCIENCEDIRECT ProQuest
EMBASE

13338100 **EMBASE No:** 2005412988
Clinical effects of a proprietary combination isoflavone nutritional supplement in menopausal women: A pilot trial

Lukaczer D.; Darland G.; Tripp M.; Liska D.; Lerman R.H.; Schiltz B.; Bland J.S.
Dr. D. Lukaczer, Department of Clinical Research, Functional Medicine Research Center, Gig Harbor, WA United States
Alternative Therapies in Health and Medicine (ALTERN. THER. HEALTH MED.) (United States) 2005 , 11/5 (60-65)
CODEN: ATHMF **ISSN:** 1078-6791
Document Type: Journal ; Article
Language: ENGLISH **Summary Language:** ENGLISH
Number Of References: 38

5/2/2 (Item 1 from file: 149)
TGG Health&Wellness DB(SM)

02917718 **Supplier Number:** 74510831 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Natural Agents in the Prevention of Cancer, Part Two: Preclinical Data and Chemoprevention for Common Cancers.

Lamson, Davis W.; Brignall, Matthew S.
Alternative Medicine Review , 6 , 2 , 167
April ,
2001
Publication Format: Magazine/Journal
ISSN: 1089-5159
Language: English
Record Type: Fulltext **Target Audience:** Academic; Professional
Word Count: 11596 **Line Count:** 00984

Descriptors: Alternative medicine--Methods; Cancer--Prevention; Dietary supplements-- Health aspects
Geographic Codes/Names: 1USA United States

5/2/3 (Item 2 from file: 149)
TGG Health&Wellness DB(SM)

02917463 **Supplier Number:** 73838971 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Menopause: A Natural Transition.

Guilliams, Thomas G.
Original Internist , 8 , 1 , 08
March ,
2001
Publication Format: Magazine/Journal
ISSN: 1529-4722
Language: English
Record Type: Fulltext **Target Audience:** Academic; Professional
Word Count: 5911 **Line Count:** 00493

Descriptors: Menopause--Physiological aspects; Postmenopausal women--Physiological aspects; Middle aged women--Care and treatment
Geographic Codes/Names: 1USA United States

5/2/4 (Item 3 from file: 149)
TGG Health&Wellness DB(SM)

02216976 **Supplier Number:** 103379489 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Buy the best: when it comes to vitamins, quality beats quantity.

Downey, Michael
Better Nutrition , 65 , 7 , 22(4)
July ,
2003
Publication Format: Magazine/Journal
ISSN: 0405-668X
Language: English
Record Type: Fulltext **Target Audience:** Consumer
Word Count: 1242 **Line Count:** 00107

Descriptors: Vitamins--Quality control; Vitamins--Evaluation
Geographic Codes/Names: 1USA United States
SIC Codes: 2834 Pharmaceutical preparations
Event Codes/Names: 353 Product quality
Product/Industry Names: 2834700 (Vitamin, Nutrient & Hematinic Preps); 2834710 (Vitamin Preparations)

NAICS Codes: 325412 Pharmaceutical Preparation Manufacturing
File Segment: HI File 149

5/2/5 (Item 4 from file: 149)
TGG Health&Wellness DB(SM)

02038535 **Supplier Number:** 80120503 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Eat to beat menopause: the right nutrients can help you navigate this passage in time. Get them in our delicious recipes.(Recipe)

Bass, Judy
Natural Health , 31 , 8 , 80(7)
Oct-Nov ,
2001
Document Type: Recipe **Publication Format:** Magazine/Journal
ISSN: 1067-9588
Language: English
Record Type: Fulltext **Target Audience:** Consumer
Word Count: 1933 **Line Count:** 00232

Descriptors: Menopause--Health aspects; Food habits--Health aspects; Women--Food and nutrition; Cookery (Oat bran)--Menus and recipes; Cookery (Beans)--Menus and recipes; Cookery (Cabbage)--Manufacture
Geographic Codes/Names: 1USA United States
File Segment: HI File 149

```
? TYPE 2917463/full from 149
```

2917463/9 (Direct type from file: 149)
TGG Health&Wellness DB(SM)

02917463 **Supplier Number:** 73838971 (THIS IS THE FULL TEXT)
Menopause: A Natural Transition.

Guilliams, Thomas G.
Original Internist , 8 , 1 , 08
March ,
2001
Publication Format: Magazine/Journal
ISSN: 1529-4722
Language: English
Record Type: Fulltext **Target Audience:** Academic; Professional
Word Count: 5911 **Line Count:** 00493

Text:

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Introduction

Over 40 million women are currently post-menopausal in the United States. The fact that those numbers will increase to 60 million in the next 10 years and the attitudes about menopause are continuing to move from viewing it as a clinical syndrome to a natural transition have opened the way for more natural and comprehensive management of menopausal symptoms. This review will discuss the physiological and clinical aspects of menopause, with a view to both the inevitable and preventable consequences of the climacteric transition. We will focus on the primary menopausal symptoms (hot flashes, insomnia, etc.), as well as the secondary conditions (osteoporosis, heart disease, etc.) associated with post-menopausal hormone levels. A brief discussion of conventional therapies will be followed by a review of natural alternatives and preventative measures. It will be clear that the treatment of menopausal symptoms can be as natural as the transition itself.

Somewhere between the ages of 45 and 55, most women experience a change in their normal menstrual cycle that results in a complete cessation of the cycle. Those transitional years, often referred to as the perimenopausal or climacteric years, lead to a number of physiological and emotional changes that affect a woman's quality of life. However, while the menopausal transition is experienced by women around world, the unique combination of diet, lifestyle (particularly stress), cultural attitudes, and longevity give it particular prominence in the Western world. The additional fact that menopause is accompanied by increased incidence of bone fractures, heart disease, depression, fatigue, loss in mental acuity, increased sexual difficulties and various cancers has often led to the conclusion that the transition itself must be an unnatural state, or even a diseased state. A correct perception of this natural transition, along with the use of natural dietary and supplemental protocols, may completely alter the quality of life of the growing number of women entering this phase of their lives.

Menopause physiology

The female hormonal cycle is an exquisitely controlled system that includes the hypothalamus, pituitary, adrenal, thyroid and gonadal tissues, involving both positive and negative feedback loops. We will not discuss the intricate nature of the menstrual cycle, only the results of its gradual ceasing here (although surgical menopause, a result of removing the uterus or ovaries, may have similar treatments).

At birth, each woman is endowed with 1-2 million primordial follicles. This pool of follicles decreases to about 300,000 by the time of menarche (puberty). Each menstrual cycle, follicle stimulating hormone

recruits several hundred to several thousand follicles. Of these, only one (or sometimes several) matures to the point of ovulation while all the others die by atresia. This process results in approximately 400 or so ovulatory cycles within a woman's lifetime and constitutes what are normally referred to as the premenopausal or reproductive years.

The number of follicles left in the ovary reserve seems to be critical to the regulation of the cycle. At about 38 years of age, when approximately 25,000 follicles re main, the rate at which follicles are recruited increases nearly two-fold, resulting in a rapid decrease in the ovary reserve. Follicle stimulating hormone (FSH) levels in these women increase throughout the cycle, signaling the beginning of a loss in the feedback mechanisms. Many researchers believe that the rise in FSH is related to the decreased ovarian production of molecules called inhibins,

which are believed to inhibit pituitary production of FSH. Few women notice any dramatic changes at this time since estradiol (E2) and progesterone levels are affected little by these changes (although fecundity is significantly reduced at this age). By age 51, the median age for the final menstrual period, the ovary reserve is about 1,000. This is typically when the "symptoms" of menopause occur, as it corresponds with a significant drop in estrogen production (usually beginning six months to one year before the final menstrual period). It is significant to note that while a woman may stop menstruating at this time, endogenous cycling and ovulation may still occur for months and even years. This is important to understand because treatment of endogenously cycling "post" menopausal women can differ from truly post-menopausal protocols.

Associated Symptoms and Risks

Menopause would be only a curious endocrinology topic except for the fact that a number of vasomotor symptoms and major medical risk factors are associated with the reduction in estrogen production. Let us briefly review some of the most common vasomotor symptoms: hot flashes, night sweats, insomnia, and genitourinary changes.

Vasomotor

Of all the signals that tell of the arrival of menopause, the hot flash (or flush) is probably the most universal. Of American menopausal women, 75% experience hot flash episodes for an average of four years, although only 15% experience severe episodes. The experience is a sensation of heat, sweating, flushing, chills lasting from 1-5 minutes. For many, anxiety and palpitations are also experienced during these hot flash episodes. A slight increase in core temperature with a dramatic increase in peripheral blood flow results in a rapid rise in skin temperature (0.5(degrees) C). Little is known about the exact physiological causes of hot flashes, although warm room temperatures (or warm compresses) can be used to induce episodes. The exact relationship of estrogen to hot flashes is unclear, because while estrogen replacement therapy can reduce hot flash frequencies, there is not a clear relationship between hot flash episodes and serum estrogen levels (comparing symptomatic and a symptomatic menopausal women). The combination of hot flashes, estrogen-related alterations of circadian rhythms, and increased frequency of depression tends to reduce sleep quality in many women during the climacteric. While it is difficult to assess how much each factor plays in decreasing sleep

quality, this is a major factor in reducing the quality of life during the menopausal transition. Often, insomnia is the primary reason for seeking medical attention.

Genitourinary Changes

Decreased estrogen during and after menopause causes physiological changes in the genital tissues. The vaginal area becomes dry and thin and loses tone due to lower estrogen levels as time passes. Decreased lubrication and thinning of the vaginal tissues increases infections, irritations, and the chance for mechanical injury. In creased urinary tract infections and incontinence are also related to a lack of tone in the tissue surrounding the bladder and urethra. These conditions, along with menopausal drops in estrogen, progesterone, and testosterone can lead to a dramatic decrease in libido. Very often, hormone replacement therapies or natural remedies that address vasomotor symptoms will also improve symptoms related to the genitourinary system.

Menopausal Risk Factors

While vasomotor symptoms may be the telltale signs of menopause, they are rarely life-threatening and slowly fade once a women is past the climacteric years. The permanent change in hormone levels has been implicated as a factor in the increased risk of several serious life-threatening diseases, such as osteoporosis, heart disease, and cancers of the breast and endometrium. One complication with data implicating the role that menopause plays in these diseases is the confounding factor that age plays. This is particularly true in the case of cardiovascular diseases, depression, decreases in cognitive ability, and the decline in libido. Because, while it is true that there is an increase of each of these with menopause, men of similar ages have a dramatically increased risk of these or similar diseases, demonstrating that these factors are closely linked with aging. Let us look briefly at these conditions and their relationship to menopause.

Osteoporosis

Of all the conditions mentioned, the link between estrogen depletion and osteoporosis seems to be the closest, although even this has been questioned since the loss in bone density begins well before the drop in estrogen. Osteoporosis is a metabolic bone disease that results in deterioration of the micro-architecture of the bone resulting in lower bone mass and increased risk of fractures. Nearly half of the women over 65 will

experience an osteoporosis-related fracture in their lifetime. These fractures (mostly of the spine, hip or forearm) dramatically increase the rate of mortality and need for long-term care. One of the most critical factors in the prevention of osteoporosis is reaching peak bone mass prior to menopause. Most women do not accomplish this for a number of reasons, among them are poor diet and lack of weight-bearing exercises. Several reports have shown that something as simple as the consumption of phosphoric acid in soft drinks reduces bone mineralization in postmenopausal women. (1) The very low phytoestrogen intake in Western diets may also play a role in this as well. We do know that estrogen plays an important role in maintaining bone mass in the female by suppressing remodeling and maintaining a balance between osteoblast and osteoclast

activities. As menopause is a low estrogen state, the balance is shifted toward the osteoclast (resorption) and away from osteoblast (bone building) activities. While hormone re placement therapy (HRT) is the conventional treatment for osteoporosis, bone loss resumes when HRT is stopped. For many, there exists a need to find an alternative approach that will become part of their lifestyle regimen for the 20-30 years they will spend after menopause.

Adequate intake of calcium, magnesium, and trace minerals, such as boron, silica, selenium, manganese and molybdenum, is important to proper bone metabolism. The mineral strontium has become a promising mineral in the treatment of osteoporosis. The hormone-like activities of vitamins D and K are also vital components in the maintenance of bone mass. Finding all the necessary components in both dietary and supplemental forms, and in a protocol that maximizes convenience and compliance is the key to ensuring a successful therapy.

Heart Disease

It has been hypothesized that menopause is associated with an increased risk of cardiovascular events, and the increase is caused by decreasing estrogen production. However, whether menopause can be concluded to be an independent risk factor is an area of controversy. The difficulty comes with the slow onset of cardiovascular deterioration and the background effects of aging. The positive correlation is related to the dramatic increase in risk when comparing pre- and postmenopausal women and the reduction of risk associated with HRT. Long-term studies are now being conducted to determine the role estrogen and HRT play in preventing cardiovascular related outcomes like atherosclerosis, heart attacks, stroke, and LDL cholesterol.

Factors to Consider

There are many factors that play a role in age of onset or the severity of the symptoms associated with menopause. Studies have shown that women who experience prevalent symptoms related to premenstrual syndrome (PMS) or whose mother experienced severe vasomotor symptoms upon the climacteric have an increased prevalence of experiencing vasomotor symptoms during their menopause. These results may be due to a consistent pattern of hormone regulation throughout one's life (and even genetically related) or may be a function of increased scrutiny and awareness of these symptoms. Two extraovarian sources of estrogen exist that allow for buffering the dramatic loss at the climacteric. The adipose tissues are capable of producing estrone and this is thought to play a role in reducing some vasomotor symptoms in heavier women. While no direct relationship between body mass index (BMI) and hot flashes (or other symptoms) can be predicted in each case, in many individuals the amount of adipose tissue may relate inversely to menopausal symptoms. The other buffering source is the adrenal gland. The role of the adrenal glands and their ability to modulate stress is often not taken into consideration by doctors when treating patients with climacteric complaints.

If the adrenal gland is incapable of responding adequately to stresses put on it, the symptoms of menopause are likely to be exacerbated. Checking adrenal stress (via cortisol and DHEA-S levels) is a simple addition to many of the salivary tests that can be done to measure estradiol and progesterone. Treating an exhausted adrenal system may dramatically improve symptoms with little other intervention. Other factors

to consider are social status, parity, education, smoking, exercise, hysterectomies (with or without ovarectomies), age at menarche, ethnicity, oral contraceptive use, and occupation; all of which can play a role in the onset or severity of menopausal symptoms. (25,26,27)

Hormone Replacement Therapy (HRT)

Conjugated estrogens, which are a mixture of active estrogens derived from the urine of pregnant mares, have been in use in the United States since the early 1940s. The use of estrogens increased for decades following, for conditions like osteoporosis and vasomotor symptoms. In the early 1970s, after evidence strongly linked unopposed estrogen therapy (estrogens without additional progesterone) with increased risk of endometrial cancers, the long-term safety of hormone replacement therapy came into question. Until 1992, Premarin was the only FDA approved oral estrogen product; others have since been approved. Several estrogen and estrogen-progestin products are now used for the treatment of vasomotor complaints and for risk reduction of heart disease and osteoporosis.

The role of estrogens has been broadened by the use of selective estrogen receptor modulators (SERMs). These are agents that produce estrogen-like effects on some tissues (like bone) and antagonize estrogen in others (reproductive tissues). Tamoxifen and raloxifene are the best-studied and most used SERMs for osteoporosis and breast cancer protection. The assumption often made is that every menopausal woman needs some form of HRT and should be on it indefinitely. This assumption is being challenged both for its own inherent risks and the desire of women to choose alternative and more natural routes of menopausal treatments. We have known that unopposed estrogen therapy increases the incidence of endometrial cancer, a risk reduced by the addition of progestins. This year we have learned that the estrogen progestin regimen increases breast cancer risk beyond the risk already associated with estrogen alone. (2) Additionally, long-term HRT is associated with gall bladder disease, liver disease, increased thromboembolic events, and the various cancers already mentioned. With the many natural options available, and increasing positive clinical data, health care professionals should no longer limit their patients' options to conventional HRT. Clearly there are cases where HRT may be the best option for an individual woman, but only when other options have been ruled out. Let us consider some of these other options.

Natural Approaches

It is important to properly assess the needs of patients and their desired outcome. As menopause is viewed and experienced differently by each woman, it is critical to develop á protocol that reflects her desire for improved quality of life and takes into consideration her risk factors for diseases for which no symptoms yet appear.

Diagnosing Perimenopause

Perhaps one of the most important aspects of treating menopause is knowing exactly where in the process the patient is. That is, diagnosing whether the patient is endogenously cycling, ovulating, or fully post-menopausal. What is her progesterone to estradiol ratio? One of the best and simplest ways to answer these questions is with salivary hormone analysis. The use of salivary free-fraction analysis of steroid hormones

like estrogens, progesterone, cortisol, and DHEA is not only becoming more common, it is becoming the preferred way of measuring these hormones. (3)

At the early stages of perimenopause, luteal phase deficiencies may lead to reduced progesterone production and irregular bleeding when compared to normal pre-menopausal patterns. Since estrogen production often does not fall until six months before the final menstrual period, this can lead to an estrogen dominant phase within perimenopause (this is also typical in fully post menopausal women). Since it is best to keep the progesterone:estrodiol ratio within a 20:1- 30:1 ratio, knowing both the estradiol and progesterone levels is beneficial to selecting the proper therapy. It is relatively easy to give natural progesterone in sublingual, oral or cream forms to bring this ratio into balance. When the patient is confirmed postmenopausal, a single salivary sample is adequate, whereas a women who is endogenously cycling should have samples taken throughout the cycle (even if she has no menses) to gather the necessary diagnostic data. Additionally, salivary cortisol, DHEA, and testosterone levels help diagnose adrenal or androgen deficiencies that may alter therapies.

Natural Hormone Replacement

After extracting either (beta)-sitosterol from soy or diosgenin from wild yam (Dioscorea villosa), these compounds can be further converted into estradiol, estrone, estriol, progesterone or DHEA. These are identical to the structures made endogenously and can be used therapeutically. A popular practice of many physicians is the compounding of natural estrogens into a tri-estrogen formula (Tri-Est). Most often this consists of a compound that is 80% estriol, 10% estrone and 10% estradiol. A typical formula provides 1 mg estriol, 0.125 mg estrone and 0.125 mg estradiol with 40 mg of micronized oral progesterone. A Bi-Est formula is also used and eliminates the estrone component. Many researchers feel that the balance between these various hormones allows for the most natural kind of hormone replacement therapy. Physicians should talk to a compounding pharmacist for more details on this form of therapy.

Diet and Supplementation

There is certainly a lot to be said about a proper diet through one's lifetime, and several extremely popular diets exist. Suffice it to say that before dealing with any of the complex symptoms that are associated with menopause, it is important to know that each patient's metabolism is able to perform its required functions -- not hindered by a lack of vitamins, minerals, calories, essential fatty acids, etc. A daily regimen including a quality multivitamin and mineral supplement, as well as supplemental oils like flax, evening primrose and fish oils, should be considered as a baseline for additional supplements. Additionally, foods containing phytoestrogens may be able to significantly alter several of the immediate symptoms and risk factors associated with menopause. Positive, but limited research has been conducted with hesperidin (a bioflavonoid) and vitamin C, vitamin B6, evening primrose oil and gamma-oryzanol (a ferulic acid compound isolated from rice bran oil). Gamma-oryzanol at 300mg/day for 8 weeks was able to reduce climacteric complaints 85% (Kupperman Index, which measures 11 different vasomotor symptoms associated with menopause) and significantly reduce total cholesterol, triglycerides and increase HDL cholesterol in cases with hyperlipidemia. (24)

Botanicals

Many herbs and herbal extracts have been used to help alleviate the

symptoms associated with the climacteric. We will discuss some of the more common ones

here, and briefly mention a few more that you may come into contact with.

Black Cohosh (Cimicifuga Racemosa)

Black Cohosh is a plant native to eastern North America. The root and rhizome portion had been used by Native Americans, who dubbed it "squaw root", long before its introduction to settlers and Western herbalists. The pharmacological and clinical research of the past several decades has made it the most widely used natural alternative to HRT in the Western world. The German Commission E has listed black cohosh as approved for PMS, dysmenorrhea or menopausal (climacteric) neurovegetative (vasomotor, etc.) ailments.

The primary, and presumably, active components found in the roots of black cohosh are a group of triterpene glycosides. Among these are acetin, cimicifugoside and the often-standardized 27-deoxyacteine. Whether these compounds work like classic phytoestrogens is still under some dispute, with conflicting research data. (4,5) Much of the dispute rests in the presence or absense of the isoflavone formononetin; and whether this is a contamination of the extract or a result of differing extraction procedures or even sub-species differences. What we do know is that clinical trials of menopausal symptoms consistently show that extracts of black cohosh are able to reduce or eliminate many of the disturbing vasomotor symptoms. It seems that black cohosh is able to reduce luteinizing hormone (LH) levels in menopausal women, a result many people conclude to be an interaction directly with receptors located within the hypothalamus-pituitary region. (6) LH surges are thought to participate as a main trigger for hot flashes, the main symptom relieved by black cohosh preparations.

In the early 1980s, the effectiveness of a black cohosh extract (standardized liquid) was studied using 629 patients with menopausal complaints. (7) After only four weeks of treatment, a clear improvement was documented by 80% of the women, and after 6-8 weeks 50% reported a complete disappearance of symptoms. While this study lacked a placebo control group, these observations, along with no reported dropouts due to side effects, show the kinds of affects reported by hundreds of doctors in Germany for years prior to this study. A second study compared a tablet containing a standardized extract of black cohosh (80 mg) with 0.625 mg of conjugated estrogens (Premarin) or 2 mg of diazepam, in the reduction of menstrual complaints. Each was able to significantly lower menopausal, as well as mood-related symptoms, but only black cohosh and estrogens were able to increase vaginal epithelium proliferation. The authors conclude, "The herbal treatment allows for the most risk-poor therapy with optimal effectiveness in comparison to hormones and psychopharmaceuticals, demonstrates a remarkable spectrum of action on the menopausal syndrome, has no toxic side effects, is suitable for long-term therapy, and is the medication of choice in cases of mild-to-moderate menopausal ailments." (8)

The results of this open study were later confirmed by a randomized, double-blinded study with placebo and estrogen. (9) The first group was given a preparation of black cohosh extract (4 mg of 27-deoxyacteine) per

day. Group 2 received 0.625 mg conjugated estrogens, and Group 3 received placebo. Results were scored using the Kupperman Index, Hamilton Anxiety scale (HAMA), and maturation indices on vaginal epithelial maturation. The results showed that the black cohosh group improved in all categories, when compared to placebo and even in relation to the estrogen group (recall that no progesterone was added). This estrogen-like potential was confirmed when

the same dose was just as effective as estriol, conjugated estrogens, and an estrogen-progestin combination in improving postoperative ovarian functional deficits after hysterectomy in young women. (10) While the majority of these articles are published in German journals, a few excellent review articles have been published in English. (11,12,13,14)

Dosing information for black cohosh has been somewhat confusing over the past decade. The original papers seem to have used daily amounts of extract yielding 8 mg of triterpenes (usually measured as 27-deoxyacteine).

Most of the studies then began using half of that amount per day (4 mg) in divided doses. Recently, a manufacturer of one of the extracts suggested only 2 mg per day is needed for the effect noted with the higher amounts. This is likely due to the participation of other, non-triterpene components. A quality extract containing 2-4 mg of triterpenes daily is therefore recommended. Expect at least two weeks and often four weeks before symptomatic changes occur. Recall that black cohosh has primarily been shown to reduce vasomotor and vaginal symptoms; no clear research shows its relation to reducing risk factors associated with cancer, heart disease, or osteoporosis. The safety of these herbal preparations has been confirmed in numerous studies, but this herb should not be confused with Blue Cohosh (Caulophyllum thalictroides), an herb, that if used improperly, has potentially toxic effects for women and their unborn children. (22)

Dong Quai (Angelica Sinensis)

The root of dong quai, also know as Chinese angelica, is a widely used remedy in Asia for a variety of female conditions, and is now becoming more popular in the United States. The roots contain a number of volatile oils and coumarins, many of which have been shown to have biological activity. The coumarin, ligustilide, is often used as a standardizing component, whether this is a more active component or simply a marker is not fully understood.

Traditionally, dong quai is thought to have a balancing or tonic effect on the female hormonal system as well as a beneficial effect on the cardiovascular system. Several reviews in English are available covering the use of dong quai. (15,16) It is most often used in Asian remedies with a number of other ingredients. It is difficult to predict what effect dong quai is intended to have as a single ingredient. One recent report that evaluated dong quai's ability to reduce hot flashes and improve vaginal and endometrial indices failed to show any improvement. (17) The failure of dong quai in this study could have stemmed from a number of issues. Primarily, the diagnostic paradigms between traditional Chinese medicine (TCM) and Western medicine are sufficiently different to make a single preparation of dong quai at these doses difficult to assess the value of these findings. The current body of research lacks sufficient information (pharmacologically and clinically) to fully recommend a menopausal protocol that uses dong quai or its extracts alone. Whether a formula that includes

dong quai will be effective for a Western diagnosis (by age, FSH, or estrodiol levels), is yet to be clinically tested.

Chaste Tree (Vitex Agnus Castus)

While the use of extracts derived from the ripened berries of the chaste tree have numerous uses in treating women, most often this herbal remedy is used in pre-menopausal women experiencing irregular menstrual complaints. One of the mechanisms proposed for vitex is an increase in LH secretion, which has a progesterone favoring effect. In the early stages of perimenopause, when cycle irregularities and slow persistant bleeding are associated with an estrogen dominant luteal phase, chaste berry extracts would be an excellent herbal choice.

Licorice Root (Glycyrrhiza Glabra)

The major active component in Licorice root is glycyrrhizin, with minor components such as (beta)-sitosterol, formononetin and coumarin. These compounds have estrogenic and anti-estrogenic capabilities. Glycyrrhizin binds both estrogen and androgen receptors weakly, although it has no affinity for the progesterone receptor. (18) Licorice root extracts support the adrenal gland, (28) one of the likely modes that licorice helps with menopausal symptoms. Of course, high levels of licorice root extract should be cautioned in individuals with high blood pressure.

Trans-Resveratrol

Resveratrol is a naturally occurring compound abundant in grapes and other plant foods, produced by these plants under stress to protect them from environmental or pathogenic attack. The trans configuration is virtually the only naturally occurring isomer, and is nearly identical to the synthetic estrogen diethylstilbesterol. This unique structure has estrogenic, antiestrogenic, antioxidant (free radical scavenging), cardioprotective, and anticancer activities. (19,20,23) The ability to act as a potential estrogenic agent, while at the same time protecting against cardiovascular risk factors, inhibiting various cancers, and increasing antioxidant protection, is a po tent combination, especially for the combined risk factors associated with menopause. Based on the protection gained by trans-resveratrol consumption from wine, dosing recommendations are in the range of 2-4 mg per day. (21) Trans-resveratrol can be extracted from grapes or is also commercially available from rhizome extracts of Polygonum cuspidatum, a plant used in traditional Chinese medicine under the name huzhang (tiger cane). While being relatively new to the nutraceutical world, reports of trans-resveratrol's actions are sure to place it in the forefront of natural substances for the treatment of menopause and its related risk factors.

Other Botanicals

Depending on where one looked, any number of botanicals are recommended for various menopausal complaints. The use of St. John's wort extracts (Hypericum perforatum) for depression and Ginkgo biloba extracts for mental acuity are frequently recommended. Preparations of valerian (Valeriana officinalis) and passion flower (Passiflora incarnata) are often recommended for insomnia. Anti-anxiety and calming herbs such as hops (Humulus lupulus), kava kava (Piper methysticum) and German chamomile (Matricaria recutita) are often prescribed by herbalists for emotional balance when necessary. Of course in TCM and Ayurvedic traditions, many herbal preparations would be used depending on the associated symptomology.

Most of these herbs or herbal combinations have not been tested using currently accepted Western clinical research outcomes. It should be understood, however, that in clinical settings, many of these remedies are found to be effective by the physicians who are the most familiar with their use.

The original 12 page periodical "The Standard Menopause" can be obtained by calling 1-715-342-9881 or E-mail: mwompi@voyager.net.

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Tom Guilliams earned his doctorate from the Medical College of Wisconsin where he focused on biochemistry and molecular immunology. He has been the Director of Science and Quality Assurance for Ortho Molecular Products since 1996. Dr. Guilliams' rare passion for product efficacy and thorough research has earned him wide respect. Dr. Guilliams publishes the quarterly periodical "The Standard", a concise update of important issues concerning natural health ingredients. A frequent guest speaker, Guilliams provides training to a variety of health care disciplines in the use of natural medicines. His lectures have stimulated a wide range of professionals, including allopathic medicine groups, acupuncturists, traditional chiropractors natural health organizations and hospitals.

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FACTORS THAT MAY AFFECT THE ONSET OF MENOPAUSE

Early Onset

* Removal of uterus or ovaries
* Cycle length shorter than 26 days
* Smoking or second-hand smoke (reversible)
* Lower number of full-term pregnancies
* Pelvic irradiation or chemotherapy
* Low socio-economic status
* Single marital status
* African-American or Latin descent
* Malnourishment
* Vegetarian diet
* Mother with early menopause
* History of depression

Delayed Onset

* Cycle length greater than 33 days
* Increased full-term pregnancies (parity)
* Use of oral contraceptives
* Moderate consumption of alcohol
* Increased consumption of phytoestrogens
* Increased Body Fat or BMI

Descriptors: Menopause--Physiological aspects; Postmenopausal women--Physiological aspects; Middle aged women--Care and treatment
Geographic Codes/Names: 1USA United States

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Eat to beat menopause: the right nutrients can help you navigate this passage in time. Get them in our delicious recipes.(Recipe)

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IF YOU SUFFER FROM UNCOMFORTABLE symptoms of menopause, relief may be as close as your kitchen. Hot flashes, irritability, and other symptoms can appear as your ovaries decrease production of estrogen. This stage of life, called perimenopause, starts on average six years prior to menopause (when you finish your last period) and ends one year after menopause. Thankfully, the right foods can help you cope.

"When I talk to women about their overall health and menopause, I start with diet because that's where they'll get the biggest bang for their buck," says Jennifer L. Prouty, a menopause specialist and a women's health nurse practitioner in Mattapoisett, Mass. Foods that contain phytoestrogens (plant estrogens), healthy fats, and certain vitamins and minerals may lessen the severity of troublesome symptoms. They may also protect against osteoporosis and heart disease, two conditions whose incidence increases with menopause. And the right diet may eliminate the need for hormone replacement therapy (HRT), or lessen HRT-related symptoms, such as bloating, nausea, and weight gain.

Here are seven key nutrients that can ease you through menopause. You may have to experiment a little to see which ones work best for you.

Boron

WHY IT'S GOOD: A study published in the British Journal of Nutrition in 1993 showed that increasing dietary intake of the mineral boron from 0.25 mg daily to 3.25 mg raised levels of estradiol (a form of estrogen) in postmenopausal women while decreasing the amount of calcium excreted in the urine. That means less risk of bone loss. U.S. Department of Agriculture studies found similar benefits for a high boron (3 mg per day) diet.

WHAT TO EAT: Three and a half ounces of almonds, prunes, or raisins each contain at least 2 mg of boron. Asparagus, cabbage, figs, peaches, and strawberries are good sources as well.

Calcium

WHY IT'S GOOD: This mineral helps guard against osteoporosis. The National Academy of Sciences considers 1,000 mg of calcium a day adequate for women between 31 and 50 and 1,200 mg a day adequate for women over 51. Most experts agree that you should try to get all the calcium you can through diet, but some women, particularly vegans, may need to supplement to reach those levels.

WHAT TO EAT: Good dairy sources include cheese (especially Parmesan

and ricotta), low-fat yogurt, and nonfat or 1-percent-fat milk. Other sources include beans, tofu, canned salmon, and dark, leafy greens.

Lignans

WHY THEY'RE GOOD: Lignans are a type of phytoestrogen; our bodies convert them into estrogenlike substances. Preliminary evidence indicates that lignans may ease hot flashes and vaginal dryness but there is no Recommended Dietary Allowance (RDA) for them.

WHAT TO EAT: Many fruits, vegetables, grains, and seeds contain lignans, but flaxseeds are the best source. Buy flaxseeds whole and grind them to sprinkle on breakfast cereals and yogurt, and add them to baked goods and casseroles. Gradually work up to 1 to 2 teaspoons of ground flaxseeds daily to avoid bloating and gas. You can use flax oil as a salad dressing or drizzle it on cooked foods. Make sure the oil's label indicates it contains lignans and particles of seed husk, and don't cook with it.

Magnesium

WHY IT'S GOOD: This mineral has a calming effect, so it eases symptoms like irritability, anxiety, mood swings, and insomnia. It also helps your bones absorb calcium, raises levels of HDL ("good") cholesterol while lowering LDL ("bad") cholesterol, and helps muscles--including your heart--to relax, says Ann Louise Gittleman, a certified nutrition specialist in Bozeman, Mont., and author of Super Nutrition for Menopause (Publishers' Group West, 1998).

WHAT TO EAT: The standard recommended amount for adult women is 320 mga day, but Gittleman suggests at least 400 mg daily for perimenopausal women. Good sources are almonds, cashews, escarole, kale, kelp, and wheat bran. For example, 1 ounce of almonds gives you 77 mg.

Omega-3 Fatty Acids

WHY THEY'RE GOOD: Components of these fatty acids may protect you from heart disease because they're believed to increase HDL cholesterol while lowering triglyceride levels and blood pressure.

WHAT TO EAT: There's no RDA for omega-3s. Your best bet is to eat fatty fish twice a week. Sardines, sockeye salmon, mackerel, and rainbow trout all have more than 1,000 mg of omega-3s in a 3 1/2-ounce serving. There are plant sources of omega-3 fats, including flaxseeds and walnuts and their oils, but your body may not use them as efficiently.

Phytoestrogens

WHY THEY'RE GOOD: At least 300 plants contain phytoestrogens, naturally occurring chemicals that behave like weak forms of human estrogen when you consume them. Because they make your body think it has more estrogen than it does, they can potentially diminish menopausal symptoms like hot flashes and vaginal dryness, according to Elaine Magee, M.P.H., R.D., a dietitian in Walnut Creek, Calif., and author of Eating Well for a Healthy Menopause (John Wiley, 1996). Some studies have shown they also guard against heart disease and osteoporosis. But if you have or have had estrogen-dependent cancer (like breast cancer), Magee says you should proceed cautiously before consuming phytoestrogen-rich foods in excessive amounts; consult your health-care practitioner.

WHAT TO EAT: Although soybeans are the best known source of phytoestrogens, vegetables and fruits like broccoli, carrots, citrus fruits, peppers, plums, and tomatoes contain appreciable amounts as well. For more details about soy, see "Close Look at Soy and Menopause," page 132.

Vitamin E

WHY IT'S GOOD: This heart protector is a good bet for the relief of hot flashes, breast tenderness, and vaginal dryness, says Gittleman. It's used topically for vaginal dryness, but there are benefits to taking it orally as well. The RDA for vitamin E is 15 mg (22 IU), but many experts recommend a therapeutic dose of 400 IU, and getting this amount daily from food is almost impossible. If you have a bleeding disorder or diabetes, or take blood thinning medication, check with your health care practitioner before supplementing with vitamin E.

WHAT TO EAT: Asparagus, avocados, brown rice, egg yolks, lima beans, peas, sweet potatoes, and vegetable oils (like corn and soybean) are the best food sources.

The following recipes will help you add these nutrients to your diet.

Apple-Banana
Bran Muffins

MAKES 12

These cholesterol-free muffins contain phytoestrogens and vitamin E. They taste best the day they are made.

Nonstick cooking spray
1 cup whole-wheat pastry flour
1 cup unbleached all-purpose flour
1 cup wheat bran
1 tablespoon baking powder
1/2 teaspoon salt
1 teaspoon ground cinnamon
1/4 teaspoon ground nutmeg
1/3 cup canola oil
1/3 cup maple syrup
1 1/2 cups soymilk
1 teaspoon vanilla extract
1 small banana, peeled and cut into 1/4-inch dice (about 1/2 cup)
1/2 medium Granny Smith apple, cored and cut into 1/4-inch dice (about 3/4 cup)

1. Adjust oven rack to center position and heat oven to 375 degrees. Lightly coat muffin pan with cooking spray.

2. Whisk flours, bran, baking powder, salt, and spices together in medium bowl.

3. Whisk oil and syrup together in large

bowl until completely blended. Whisk in soymilk and vanilla extract.

4. Using rubber spatula, fold dry ingredients into wet mixture until just combined. Gently stir in fruits. (Do not overmix.) Divide batter evenly in prepared muffin tin.

5. Bake until toothpick inserted in center of muffin comes out clean, 20 to 25 minutes. Cool in pan for 15 minutes, and then transfer muffins to rack to cool completely.

PER MUFFIN: 185 CALORIES, 5 G PROTEIN, 7 G FAT, 1 G SATURATED FAT, 27 G CARBOHYDRATES, 4 G FIBER, 184 MG SODIUM, 10% CALCIUM

Bean-Escarole Salad

SERVES 4

This salad offers plenty of magnesium and phytoestrogens. If you can't find soybeans, try 1 1/2 cups cooked, shelled edamame or pinto beans. Kelp granules are available at natural food stores.

DRESSING

1 tablespoon lignan-rich flax oil
1 tablespoon water
1 tablespoon soy sauce or tamari
1 tablespoon lemon juice
2 teaspoons Dijon mustard
1 teaspoon kelp granules

SALAD

1 15-ounce can soybeans, drained, rinsed, and patted dry on paper towels
1/2 medium red bell pepper, stemmed, seeded, and cut into 1/4-inch dice (about 1/2 cup)
1/4 cup chopped fresh parsley leaves
2 cups finely shredded escarole
1 small avocado, peeled, pitted, and cut into 1/4-inch dice

1. Combine all dressing ingredients in small bowl with whisk and set aside.

2. Gently mix soybeans, pepper, and parsley

together in a medium bowl. Add dressing, toss gently, and set aside for at least 5 minutes or up to 1 hour.

3. When ready to serve, divide escarole among four small bowls. Gently mix avocado into bean salad. Spoon some bean salad over each portion of escarole. Serve immediately.

PER SERVING: 304 CALORIES, 20 G PROTEIN, 20 G FAT, 3 S SATURATED FAT, 16 G CARBOHYDRATES, 9 G FIBER, 228 MG SODIUM, 13% CALCIUM

Navy Bean, Kale, and Butternut Squash Soup

SERVES 4 TO 6

The beans and kale in this soup contribute lots of calcium. Collards, which are also rich in calcium, can be used in place of kale. Start with the lower amounts of miso and lemon juice listed below, taste the soup, and then adjust the seasonings as desired.

1 tablespoon canola oil
1/2 teaspoon ground cumin
1 medium butternut squash (about 1 3/4 pounds), peeled, seeded, and cut into 1/2-inch dice (4 cups)
2 medium garlic cloves, minced
4 cups vegetable broth
1 15-ounce can navy beans, drained and rinsed
1/2 teaspoon minced fresh thyme leaves
1/2 teaspoon minced fresh rosemary
1 teaspoon minced fresh sage leaves
2 cups finely shredded kale leaves
2 to 3 teaspoons red miso
1 to 2 teaspoons lemon juice

1. Heat oil in large saucepan over medium heat. Add cumin and cook until very fragrant, about 1 minute. Add squash and cook, stirring occasionally, until golden brown, about 4 minutes. (It's fine if some squash sticks to pan). Add garlic and cook until fragrant, about 1 minute.

2. Add vegetable broth, turn heat to high,

and bring soup to a boil. Reduce heat and simmer, stirring occasionally, until squash begins to soften, about 6 minutes. Add beans, herbs, and kale, and simmer until squash is tender, about 10 minutes.

3. Remove pan from heat. Ladle some soup broth into small bowl with miso; whisk to combine. Stir thinned miso back into pot, along with lemon juice. Adjust seasonings. Ladle soup into individual bowls and serve immediately.

PER SERVING: 335 CALORIES, 14G PROTEIN, 5 G FAT, 1 G SATURATED FAT, 64 G CARBOHYDRATES, 14 G FIBER, 159 MG SODIUM, 24% CALCIUM

Stuffed Cabbage Leaves

SERVES 4

This entree provides you with boron, magnesium, and phytoestrogens. The brown rice filling is flavorful and light. To obtain 3 cups of cooked brown rice, start with 1 cup of raw rice and 2 cups of water.

1 large head green cabbage
Salt
1 tablespoon canola oil
1 teaspoon ground cumin
1/4 teaspoon ground turmeric
2 medium garlic cloves, minced
1 small onion, chopped
8 ounces extra-firm tofu, cut into 1/4-inch dice and blotted dry

1 tablespoon soy sauce or tamari
1 teaspoon dried oregano
1 14.5-ounce can diced tomatoes
Ground black pepper
3 cups cooked short-grain brown rice
1/4 cup sliced almonds
1/4 cup chopped fresh basil leaves, plus 8 small leaves for garnish
Nonstick cooking spray

1. Bring several quarts of water to a boil in large saucepan. Remove core from cabbage with a small knife. Carefully pull off

8 leaves so that they stay as whole as possible. (Reserve remaining cabbage for another use.) Generously salt boiling water and add cabbage leaves. Cook until tender, about 4 minutes. Drain cabbage leaves and cool in colander while preparing stuffing.

2. Heat oil in large skillet over medium heat. Add cumin and turmeric and cook until fragrant, about 1 minute. Add garlic and onion and cook until softened, for about 2 minutes. Add tofu, soy sauce, and oregano and cook, stirring constantly, until tofu colors slightly, about 4 minutes.

3. Add tomatoes and cook until most of their liquid has evaporated, about 8 minutes. Season with salt and pepper to taste. Remove pan from heat and cool slightly.

4. Mix rice, almonds, and chopped basil in large bowl. Stir in tomato sauce and adjust seasonings.

5. Remove cabbage leaves from colander and blot dry with paper towels. Place one cabbage leaf on flat surface with outside of leaf facing down and stem end pointing toward you. Place scant 2/3 cup of rice mixture in center of leaf. Fold stem edge over rice filling. Fold one side and then other side toward the middle. Fold top edge in to completely seal in rice mixture. Repeat with remaining leaves and filling. (Filled leaves can be placed on platter, covered, and refrigerated for several hours.)

6. When ready to serve, bring several cups of water to a boil in large casserole or Dutch oven. Lightly grease steamer basket with cooking spray. Place stuffed cabbage leaves, seam side down, in basket. Lower basket into pot, cover, and steam until filling is hot, about 6 minutes. Remove basket from pot,

transfer 2 stuffed cabbage leaves to each plate, and garnish with basil leaves. Serve immediately.

PER SERVING: 427 CALORIES, 19G PROTEIN, 15 G FAT, 2 G SATURATED FAT, 58 G CARBOHYDRATES, 11 G FIBER, 238 MG SODIUM, 28% CALCIUM

Strawberry-Cashew Shake

MAKES 2 2/3 CUP5
ENOUGH FOR 2 SERVINGS

This thick pink shake makes an excellent breakfast drink. It's rich in lignans and boron.

2/3 cup raw cashews (about 3 ounces)
1 tablespoon ligna--rich flaxseed oil
1 tablespoon maple syrup
4 ounces frozen strawberries

Place all ingredients in blender with 1 1/2 cups water. Blend at high speed until completely smooth, about 1 minute. Serve immediately,

PER SERVING: 345 CALORIES, 7 G PROTEIN, 25 G FAT, 4 G SATURATED FAT, 26 G CARBOHYDRATES, 3 G FIBER, 9 MG SODIUM, 3% CALCIUM

Foods That Make Menopause Miserable

WHILE SOME FOODS CAN ERASE or lessen menopausal symptoms, others can exacerbate them. If you suffer from any of the following complaints, here's what to watch out for.

HOT FLASHES: Stimulants, like caffeine and alcohol, and heat-producing foods, like spicy foods and hot drinks, can bring on hot flashes in some people, says Elaine Magee, M.P.H., R.D., a dietitian in Walnut Creek, Calif. Eliminate them from your diet to see if it helps.

NAUSEA: To prevent that queasy feeling, skip acidic foods like tomatoes and orange juice if your stomach is empty.

MOOD SWINGS: Avoid high-sugar foods, especially on an empty stomach. They can make your blood sugar quickly spike up and then sharply drop, causing your mood to follow suit.

CALCIUM LOSS: Caffeine, a diuretic, doubles your rate of calcium loss through urine. Three cups of coffee can cause you to lose 45 mg of calcium, says Ann Louise Gittleman, a certified nutrition specialist in Bozeman, Mont. Many soft drinks contain not only caffeine but phosphoric acid, which interferes with calcium absorption in your intestines. Diets high in protein and sodium also encourage calcium loss.

HEADACHES: Avoid red wine, beer, coffee, and chocolate, because alcohol and caffeine are common headache triggers.

A Close Look at Soy and Menopause

FOR YEARS WOMEN HAVE CONSUMED SOY in a variety of forms, including supplements, hoping to ease their hot flashes. But lately some health experts have questioned the wisdom of eating so much soy.

Looking for answers, the North American Menopause Society (NAMS), a nonprofit organization in Cleveland, Ohio, convened a panel of eight experts to examine the research on soy and women's health. They reviewed more than 100 studies related to isoflavones (phytoestrogens in soy), but unfortunately could come to few conclusions. Their findings were published in Menopause: The Journal of the North American Menopause Society in 2000.

Some studies, they noted, indicate that isoflavones can ease hot flashes, but others found only a slight reduction. The panel also said that safe levels of isoflavone intake haven't been established yet, and questions remain about how consuming a lot of isoflavones affects healthy women.

One panel member, Mark Messina, Ph.D., a nutritionist in Port Townsend, Wash., and author of The Simple Soybean and Your Health (Avery, 1994), believes a target daily intake should be about 15 g of soy protein and 50 mg of isoflavones. He also feels that women shouldn't have more than about 25 to 30 g of soy protein per day and about 100 mg of isoflavones. (There are 100 mg of isoflavones in 10 1/2 ounces of tofu, 3/4 cup shelled edamame, or 5 cups of soymilk.) "But there's little evidence to think that consuming amounts somewhat greater than this is harmful," he adds. Soyfoods should be your preferred way to get isoflavones. Supplements are fine as a backup, Messina says.

The bottom line? Make soy just one element of a varied, balanced diet.

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Introduction

Over 40 million women are currently post-menopausal in the United States. The fact that those numbers will increase to 60 million in the next 10 years and the attitudes about menopause are continuing to move from viewing it as a clinical syndrome to a natural transition have opened the way for more natural and comprehensive management of menopausal symptoms. This review will discuss the physiological and clinical aspects of menopause, with a view to both the inevitable and preventable consequences of the climacteric transition. We will focus on the primary menopausal symptoms (hot flashes, insomnia, etc.), as well as the secondary conditions (osteoporosis, heart disease, etc.) associated with post-menopausal hormone levels. A brief discussion of conventional therapies will be followed by a review of natural alternatives and preventative measures. It will be clear that the treatment of menopausal symptoms can be as natural as the transition itself.

Somewhere between the ages of 45 and 55, most women experience a change in their normal menstrual cycle that results in a complete cessation of the cycle. Those transitional years, often referred to as the perimenopausal or climacteric years, lead to a number of physiological and emotional changes that affect a woman's quality of life. However, while the menopausal transition is experienced by women around world, the unique combination of diet, lifestyle (particularly stress), cultural attitudes, and longevity give it particular prominence in the Western world. The additional fact that menopause is accompanied by increased incidence of bone fractures, heart disease, depression, fatigue, loss in mental acuity, increased sexual difficulties and various cancers has often led to the conclusion that the transition itself must be an unnatural state, or even a diseased state. A correct perception of this natural transition, along with the use of natural dietary and supplemental protocols, may completely alter the quality of life of the growing number of women entering this phase of their lives.

Menopause physiology

The female hormonal cycle is an exquisitely controlled system that includes the hypothalamus, pituitary, adrenal, thyroid and gonadal tissues, involving both positive and negative feedback loops. We will not discuss the intricate nature of the menstrual cycle, only the results of its gradual ceasing here (although surgical menopause, a result of removing the uterus or ovaries, may have similar treatments).

At birth, each woman is endowed with 1-2 million primordial follicles. This pool of follicles decreases to about 300,000 by the time of menarche (puberty). Each menstrual cycle, follicle stimulating hormone recruits several hundred to several thousand follicles. Of these, only one (or sometimes several) matures to the point of ovulation while all the others die by atresia. This process results in approximately 400 or so ovulatory cycles within a woman's lifetime and constitutes what are normally referred to as the premenopausal or reproductive years.

The number of follicles left in the ovary reserve seems to be critical to the regulation of the cycle. At about 38 years of age, when approximately 25,000 follicles re main, the rate at which follicles are recruited increases nearly two-fold, resulting in a rapid decrease in the ovary reserve. Follicle stimulating hormone (FSH) levels in these women increase throughout the cycle, signaling the beginning of a loss in the feedback mechanisms. Many researchers believe that the rise in FSH is related to the decreased ovarian production of molecules called inhibins, which are believed to inhibit pituitary production of FSH. Few women notice any dramatic changes at this time since estradiol (E2) and progesterone levels are affected little by these changes (although fecundity is significantly reduced at this age). By age 51, the median age for the final menstrual period, the ovary reserve is about 1,000. This is typically when the "symptoms" of menopause occur, as it corresponds with a significant drop in estrogen production (usually beginning six months to one year before the final menstrual period). It is significant to note that while a woman may stop menstruating at this time, endogenous cycling and ovulation may still occur for months and even years. This is important to understand because treatment of endogenously cycling "post" menopausal women can differ from truly post-menopausal protocols.

Associated Symptoms and Risks

Menopause would be only a curious endocrinology topic except for the fact that a number of vasomotor symptoms and major medical risk factors are associated with the reduction in estrogen production. Let us briefly review some of the most common vasomotor symptoms: hot flashes, night sweats, insomnia, and genitourinary changes.

Vasomotor

Of all the signals that tell of the arrival of menopause, the hot flash (or flush) is probably the most universal. Of American menopausal women, 75% experience hot flash episodes for an average of four years, although only 15% experience severe episodes. The experience is a sensation of heat, sweating, flushing, chills lasting from 1-5 minutes. For many, anxiety and palpitations are also experienced during these hot flash episodes. A slight increase in core temperature with a dramatic increase in peripheral blood flow results in a rapid rise in skin temperature (0.5(degrees) C). Little is known about the exact physiological causes of hot flashes, although warm room temperatures (or warm compresses) can be used to induce episodes. The exact relationship of estrogen to hot flashes

is unclear, because while estrogen replacement therapy can reduce hot flash frequencies, there is not a clear relationship between hot flash episodes and serum estrogen levels (comparing symptomatic and a symptomatic menopausal women). The combination of hot flashes, estrogen-related alterations of circadian rhythms, and increased frequency of depression tends to reduce sleep quality in many women during the climacteric. While it is difficult to assess how much each factor plays in decreasing sleep quality, this is a major factor in reducing the quality of life during the menopausal transition. Often, insomnia is the primary reason for seeking medical attention.

Genitourinary Changes

Decreased estrogen during and after menopause causes physiological changes in the genital tissues. The vaginal area becomes dry and thin and loses tone due to lower estrogen levels as time passes. Decreased lubrication and thinning of the vaginal tissues increases infections, irritations, and the chance for mechanical injury. In creased urinary tract infections and incontinence are also related to a lack of tone in the tissue surrounding the bladder and urethra. These conditions, along with menopausal drops in estrogen, progesterone, and testosterone can lead to a dramatic decrease in libido. Very often, hormone replacement therapies or natural remedies that address vasomotor symptoms will also improve symptoms related to the genitourinary system.

Menopausal Risk Factors

While vasomotor symptoms may be the telltale signs of menopause, they are rarely life-threatening and slowly fade once a women is past the climacteric years. The permanent change in hormone levels has been implicated as a factor in the increased risk of several serious life-threatening diseases, such as osteoporosis, heart disease, and cancers of the breast and endometrium. One complication with data implicating the role that menopause plays in these diseases is the confounding factor that age plays. This is particularly true in the case of cardiovascular diseases, depression, decreases in cognitive ability, and the decline in libido. Because, while it is true that there is an increase of each of these with menopause, men of similar ages have a dramatically increased risk of these or similar diseases, demonstrating that these factors are closely linked with aging. Let us look briefly at these conditions and their relationship to menopause.

Osteoporosis

Of all the conditions mentioned, the link between estrogen depletion and osteoporosis seems to be the closest, although even this has been questioned since the loss in bone density begins well before the drop in estrogen. Osteoporosis is a metabolic bone disease that results in deterioration of the micro-architecture of the bone resulting in lower bone mass and increased risk of fractures. Nearly half of the women over 65 will experience an osteoporosis-related fracture in their lifetime. These fractures (mostly of the spine, hip or forearm) dramatically increase the rate of mortality and need for long-term care. One of the most critical factors in the prevention of osteoporosis is reaching peak bone mass prior

to menopause. Most women do not accomplish this for a number of reasons, among them are poor diet and lack of weight-bearing exercises. Several reports have shown that something as simple as the consumption of phosphoric acid in soft drinks reduces bone mineralization in postmenopausal women. (1) The very low phytoestrogen intake in Western diets may also play a role in this as well. We do know that estrogen plays an important role in maintaining bone mass in the female by suppressing remodeling and maintaining a balance between osteoblast and osteoclast activities. As menopause is a low estrogen state, the balance is shifted toward the osteoclast (resorption) and away from osteoblast (bone building) activities. While hormone re placement therapy (HRT) is the conventional treatment for osteoporosis, bone loss resumes when HRT is stopped. For many, there exists a need to find an alternative approach that will become part of their lifestyle regimen for the 20-30 years they will spend after menopause.

Adequate intake of calcium, magnesium, and trace minerals, such as boron, silica, selenium, manganese and molybdenum, is important to proper bone metabolism. The mineral strontium has become a promising mineral in the treatment of osteoporosis. The hormone-like activities of vitamins D and K are also vital components in the maintenance of bone mass. Finding all the necessary components in both dietary and supplemental forms, and in a protocol that maximizes convenience and compliance is the key to ensuring a successful therapy.

Heart Disease

It has been hypothesized that menopause is associated with an increased risk of cardiovascular events, and the increase is caused by decreasing estrogen production. However, whether menopause can be concluded to be an independent risk factor is an area of controversy. The difficulty comes with the slow onset of cardiovascular deterioration and the background effects of aging. The positive correlation is related to the dramatic increase in risk when comparing pre- and postmenopausal women and the reduction of risk associated with HRT. Long-term studies are now being conducted to determine the role estrogen and HRT play in preventing cardiovascular related outcomes like atherosclerosis, heart attacks, stroke, and LDL cholesterol.

Factors to Consider

There are many factors that play a role in age of onset or the severity of the symptoms associated with menopause. Studies have shown that women who experience prevalent symptoms related to premenstrual syndrome (PMS) or whose mother experienced severe vasomotor symptoms upon the climacteric have an increased prevalence of experiencing vasomotor symptoms during their menopause. These results may be due to a consistent pattern of hormone regulation throughout one's life (and even genetically related) or may be a function of increased scrutiny and awareness of these symptoms. Two extraovarian sources of estrogen exist that allow for buffering the dramatic loss at the climacteric. The adipose tissues are capable of producing estrone and this is thought to play a role in reducing some vasomotor symptoms in heavier women. While no direct relationship between body mass index (BMI) and hot flashes (or other symptoms) can be predicted in each case, in many individuals the amount of adipose tissue may relate inversely to menopausal symptoms. The other buffering source is the adrenal gland. The role of the adrenal glands and their ability to modulate stress

is often not taken into consideration by doctors when treating patients with climacteric complaints.

If the adrenal gland is incapable of responding adequately to stresses put on it, the symptoms of menopause are likely to be exacerbated. Checking adrenal stress (via cortisol and DHEA-S levels) is a simple addition to many of the salivary tests that can be done to measure estradiol and progesterone. Treating an exhausted adrenal system may dramatically improve symptoms with little other intervention. Other factors to consider are social status, parity, education, smoking, exercise, hysterectomies (with or without ovarectomies), age at menarche, ethnicity, oral contraceptive use, and occupation; all of which can play a role in the onset or severity of menopausal symptoms. (25,26,27)

Hormone Replacement Therapy (HRT)

Conjugated estrogens, which are a mixture of active estrogens derived from the urine of pregnant mares, have been in use in the United States since the early 1940s. The use of estrogens increased for decades following, for conditions like osteoporosis and vasomotor symptoms. In the early 1970s, after evidence strongly linked unopposed estrogen therapy (estrogens without additional progesterone) with increased risk of endometrial cancers, the long-term safety of hormone replacement therapy came into question. Until 1992, Premarin was the only FDA approved oral estrogen product; others have since been approved. Several estrogen and estrogen-progestin products are now used for the treatment of vasomotor complaints and for risk reduction of heart disease and osteoporosis.

The role of estrogens has been broadened by the use of selective estrogen receptor modulators (SERMs). These are agents that produce estrogen-like effects on some tissues (like bone) and antagonize estrogen in others (reproductive tissues). Tamoxifen and raloxifene are the best-studied and most used SERMs for osteoporosis and breast cancer protection. The assumption often made is that every menopausal woman needs some form of HRT and should be on it indefinitely. This assumption is being challenged both for its own inherent risks and the desire of women to choose alternative and more natural routes of menopausal treatments. We have known that unopposed estrogen therapy increases the incidence of endometrial cancer, a risk reduced by the addition of progestins. This year we have learned that the estrogen progestin regimen increases breast cancer risk beyond the risk already associated with estrogen alone. (2) Additionally, long-term HRT is associated with gall bladder disease, liver disease, increased thromboembolic events, and the various cancers already mentioned. With the many natural options available, and increasing positive clinical data, health care professionals should no longer limit their patients' options to conventional HRT. Clearly there are cases where HRT may be the best option for an individual woman, but only when other options have been ruled out. Let us consider some of these other options.

Natural Approaches

It is important to properly assess the needs of patients and their desired outcome. As menopause is viewed and experienced differently by each woman, it is critical to develop a protocol that reflects her desire for improved quality of life and takes into consideration her risk factors for diseases for which no symptoms yet appear.

Diagnosing Perimenopause

Perhaps one of the most important aspects of treating menopause is knowing exactly where in the process the patient is. That is, diagnosing whether the patient is endogenously cycling, ovulating, or fully post-menopausal. What is her progesterone to estradiol ratio? One of the best and simplest ways to answer these questions is with salivary hormone analysis. The use of salivary free-fraction analysis of steroid hormones like estrogens, progesterone, cortisol, and DHEA is not only becoming more common, it is becoming the preferred way of measuring these hormones. (3)

At the early stages of perimenopause, luteal phase deficiencies may lead to reduced progesterone production and irregular bleeding when compared to normal pre-menopausal patterns. Since estrogen production often does not fall until six months before the final menstrual period, this can lead to an estrogen dominant phase within perimenopause (this is also typical in fully post menopausal women). Since it is best to keep the progesterone:estrodiol ratio within a 20:1- 30:1 ratio, knowing both the estradiol and progesterone levels is beneficial to selecting the proper therapy. It is relatively easy to give natural progesterone in sublingual, oral or cream forms to bring this ratio into balance. When the patient is confirmed postmenopausal, a single salivary sample is adequate, whereas a women who is endogenously cycling should have samples taken throughout the cycle (even if she has no menses) to gather the necessary diagnostic data. Additionally, salivary cortisol, DHEA, and testosterone levels help diagnose adrenal or androgen deficiencies that may alter therapies.

Natural Hormone Replacement

After extracting either (beta)-sitosterol from soy or diosgenin from wild yam (Dioscorea villosa), these compounds can be further converted into estradiol, estrone, estriol, progesterone or DHEA. These are identical to the structures made endogenously and can be used therapeutically. A popular practice of many physicians is the compounding of natural estrogens into a tri-estrogen formula (Tri-Est). Most often this consists of a compound that is 80% estriol, 10% estrone and 10% estradiol. A typical formula provides 1 mg estriol, 0.125 mg estrone and 0.125 mg estradiol with 40 mg of micronized oral progesterone. A Bi-Est formula is also used and eliminates the estrone component. Many researchers feel that the balance between these various hormones allows for the most natural kind of hormone replacement therapy. Physicians should talk to a compounding pharmacist for more details on this form of therapy.

Diet and Supplementation

There is certainly a lot to be said about a proper diet through one's lifetime, and several extremely popular diets exist. Suffice it to say that before dealing with any of the complex symptoms that are associated with menopause, it is important to know that each patient's metabolism is able to perform its required functions -- not hindered by a lack of vitamins, minerals, calories, essential fatty acids, etc. A daily regimen including a quality multivitamin and mineral supplement, as well as supplemental oils like flax, evening primrose and fish oils, should be considered as a baseline for additional supplements. Additionally, foods containing phytoestrogens may be able to significantly alter several of the immediate symptoms and risk factors associated with menopause. Positive, but limited research has been conducted with hesperidin (a bioflavonoid) and vitamin C,

vitamin B6, evening primrose oil and gamma-oryzanol (a ferulic acid compound isolated from rice bran oil). Gamma-oryzanol at 300mg/day for 8 weeks was able to reduce climacteric complaints 85% (Kupperman Index, which measures 11 different vasomotor symptoms associated with menopause) and significantly reduce total cholesterol, triglycerides and increase HDL cholesterol in cases with hyperlipidemia. (24)

Botanicals

Many herbs and herbal extracts have been used to help alleviate the symptoms associated with the climacteric. We will discuss some of the more common ones

here, and briefly mention a few more that you may come into contact with.

Black Cohosh (Cimicifuga Racemosa)

Black Cohosh is a plant native to eastern North America. The root and rhizome portion had been used by Native Americans, who dubbed it "squaw root", long before its introduction to settlers and Western herbalists. The pharmacological and clinical research of the past several decades has made it the most widely used natural alternative to HRT in the Western world. The German Commission E has listed black cohosh as approved for PMS, dysmenorrhea or menopausal (climacteric) neurovegetative (vasomotor, etc.) ailments.

The primary, and presumably, active components found in the roots of black cohosh are a group of triterpene glycosides. Among these are acetin, cimicifugoside and the often-standardized 27-deoxyacteine. Whether these compounds work like classic phytoestrogens is still under some dispute, with conflicting research data. (4,5) Much of the dispute rests in the presence or absense of the isoflavone formononetin; and whether this is a contamination of the extract or a result of differing extraction procedures or even sub-species differences. What we do know is that clinical trials of menopausal symptoms consistently show that extracts of black cohosh are able to reduce or eliminate many of the disturbing vasomotor symptoms. It seems that black cohosh is able to reduce luteinizing hormone (LH) levels in menopausal women, a result many people conclude to be an interaction directly with receptors located within the hypothalamus-pituitary region. (6) LH surges are thought to participate as a main trigger for hot flashes, the main symptom relieved by black cohosh preparations.

In the early 1980s, the effectiveness of a black cohosh extract (standardized liquid) was studied using 629 patients with menopausal complaints. (7) After only four weeks of treatment, a clear improvement was documented by 80% of the women, and after 6-8 weeks 50% reported a complete disappearance of symptoms. While this study lacked a placebo control group, these observations, along with no reported dropouts due to side effects, show the kinds of affects reported by hundreds of doctors in Germany for years prior to this study. A second study compared a tablet containing a standardized extract of black cohosh (80 mg) with 0.625 mg of conjugated estrogens (Premarin) or 2 mg of diazepam, in the reduction of menstrual complaints. Each was able to significantly lower menopausal, as well as mood-related symptoms, but only black cohosh and estrogens were able to increase vaginal epithelium proliferation. The authors conclude, "The

herbal treatment allows for the most risk-poor therapy with optimal effectiveness in comparison to hormones and psychopharmaceuticals, demonstrates a remarkable spectrum of action on the menopausal syndrome, has no toxic side effects, is suitable for long-term therapy, and is the medication of choice in cases of mild-to-moderate menopausal ailments." (8)

The results of this open study were later confirmed by a randomized, double-blinded study with placebo and estrogen. (9) The first group was given a preparation of black cohosh extract (4 mg of 27-deoxyacteine) per day. Group 2 received 0.625 mg conjugated estrogens, and Group 3 received placebo. Results were scored using the Kupperman Index, Hamilton Anxiety scale (HAMA), and maturation indices on vaginal epithelial maturation. The results showed that the black cohosh group improved in all categories, when compared to placebo and even in relation to the estrogen group (recall that no progesterone was added). This estrogen-like potential was confirmed when the same dose was just as effective as estriol, conjugated estrogens, and an estrogen-progestin combination in improving postoperative ovarian functional deficits after hysterectomy in young women. (10) While the majority of these articles are published in German journals, a few excellent review articles have been published in English. (11,12,13,14)

Dosing information for black cohosh has been somewhat confusing over the past decade. The original papers seem to have used daily amounts of extract yielding 8 mg of triterpenes (usually measured as 27-deoxyacteine).

Most of the studies then began using half of that amount per day (4 mg) in divided doses. Recently, a manufacturer of one of the extracts suggested only 2 mg per day is needed for the effect noted with the higher amounts. This is likely due to the participation of other, non-triterpene components. A quality extract containing 2-4 mg of triterpenes daily is therefore recommended. Expect at least two weeks and often four weeks before symptomatic changes occur. Recall that black cohosh has primarily been shown to reduce vasomotor and vaginal symptoms; no clear research shows its relation to reducing risk factors associated with cancer, heart disease, or osteoporosis. The safety of these herbal preparations has been confirmed in numerous studies, but this herb should not be confused with Blue Cohosh (Caulophyllum thalictroides), an herb, that if used improperly, has potentially toxic effects for women and their unborn children. (22)

Dong Quai (Angelica Sinensis)

The root of dong quai, also know as Chinese angelica, is a widely used remedy in Asia for a variety of female conditions, and is now becoming more popular in the United States. The roots contain a number of volatile oils and coumarins, many of which have been shown to have biological activity. The coumarin, ligustilide, is often used as a standardizing component, whether this is a more active component or simply a marker is not fully understood.

Traditionally, dong quai is thought to have a balancing or tonic effect on the female hormonal system as well as a beneficial effect on the cardiovascular system. Several reviews in English are available covering the use of dong quai. (15,16) It is most often used in Asian remedies with a number of other ingredients. It is difficult to predict what effect dong quai is intended to have as a single ingredient. One recent report that evaluated dong quai's ability to reduce hot flashes and improve vaginal and endometrial indices failed to show any improvement. (17) The failure of

dong quai in this study could have stemmed from a number of issues. Primarily, the diagnostic paradigms between traditional Chinese medicine (TCM) and Western medicine are sufficiently different to make a single preparation of dong quai at these doses difficult to assess the value of these findings. The current body of research lacks sufficient information (pharmacologically and clinically) to fully recommend a menopausal protocol that uses dong quai or its extracts alone. Whether a formula that includes dong quai will be effective for a Western diagnosis (by age, FSH, or estrodiol levels), is yet to be clinically tested.

Chaste Tree (Vitex Agnus Castus)

While the use of extracts derived from the ripened berries of the chaste tree have numerous uses in treating women, most often this herbal remedy is used in pre-menopausal women experiencing irregular menstrual complaints. One of the mechanisms proposed for vitex is an increase in LH secretion, which has a progesterone favoring effect. In the early stages of perimenopause, when cycle irregularities and slow persistant bleeding are associated with an estrogen dominant luteal phase, chaste berry extracts would be an excellent herbal choice.

Licorice Root (Glycyrrhiza Glabra)

The major active component in Licorice root is glycyrrhizin, with minor components such as (beta)-sitosterol, formononetin and coumarin. These compounds have estrogenic and anti-estrogenic capabilities. Glycyrrhizin binds both estrogen and androgen receptors weakly, although it has no affinity for the progesterone receptor. (18) Licorice root extracts support the adrenal gland, (28) one of the likely modes that licorice helps with menopausal symptoms. Of course, high levels of licorice root extract should be cautioned in individuals with high blood pressure.

Trans-Resveratrol

Resveratrol is a naturally occurring compound abundant in grapes and other plant foods, produced by these plants under stress to protect them from environmental or pathogenic attack. The trans configuration is virtually the only naturally occurring isomer, and is nearly identical to the synthetic estrogen diethylstilbesterol. This unique structure has estrogenic, antiestrogenic, antioxidant (free radical scavenging), cardioprotective, and anticancer activities. (19,20,23) The ability to act as a potential estrogenic agent, while at the same time protecting against cardiovascular risk factors, inhibiting various cancers, and increasing antioxidant protection, is a po tent combination, especially for the combined risk factors associated with menopause. Based on the protection gained by trans-resveratrol consumption from wine, dosing recommendations are in the range of 2-4 mg per day. (21) Trans-resveratrol can be extracted from grapes or is also commercially available from rhizome extracts of Polygonum cuspidatum, a plant used in traditional Chinese medicine under the name huzhang (tiger cane). While being relatively new to the nutraceutical world, reports of trans-resveratrol's actions are sure to place it in the forefront of natural substances for the treatment of menopause and its related risk factors.

Other Botanicals

Depending on where one looked, any number of botanicals are

recommended for various menopausal complaints. The use of St. John's wort extracts (Hypericum perforatum) for depression and Ginkgo biloba extracts for mental acuity are frequently recommended. Preparations of valerian (Valeriana officinalis) and passion flower (Passiflora incarnata) are often recommended for insomnia. Anti-anxiety and calming herbs such as hops (Humulus lupulus), kava kava (Piper methysticum) and German chamomile (Matricaria recutita) are often prescribed by herbalists for emotional balance when necessary. Of course in TCM and Ayurvedic traditions, many herbal preparations would be used depending on the associated symptomology. Most of these herbs or herbal combinations have not been tested using currently accepted Western clinical research outcomes. It should be understood, however, that in clinical settings, many of these remedies are found to be effective by the physicians who are the most familiar with their use.

The original 12 page periodical "The Standard Menopause" can be obtained by calling 1-715-342-9881 or E-mail: mwompi@voyager.net.

Acknowledgement: I would like to thank Jeremy Johnson for gathering and organizing many of the references used to write this review. His assistance and discussion were invaluable and added tremendously to the content of this article.

Tom Guilliams earned his doctorate from the Medical College of Wisconsin where he focused on biochemistry and molecular immunology. He has been the Director of Science and Quality Assurance for Ortho Molecular Products since 1996. Dr. Guilliams' rare passion for product efficacy and thorough research has earned him wide respect. Dr. Guilliams publishes the quarterly periodical "The Standard", a concise update of important issues concerning natural health ingredients. A frequent guest speaker, Guilliams provides training to a variety of health care disciplines in the use of natural medicines. His lectures have stimulated a wide range of professionals, including allopathic medicine groups, acupuncturists, traditional chiropractors natural health organizations and hospitals.

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FACTORS THAT MAY AFFECT THE ONSET OF MENOPAUSE

Early Onset

* Removal of uterus or ovaries

* Cycle length shorter than 26 days
* Smoking or second-hand smoke (reversible)
* Lower number of full-term pregnancies
* Pelvic irradiation or chemotherapy
* Low socio-economic status
* Single marital status
* African-American or Latin descent
* Malnourishment
* Vegetarian diet
* Mother with early menopause
* History of depression

Delayed Onset

* Cycle length greater than 33 days
* Increased full-term pregnancies (parity)
* Use of oral contraceptives
* Moderate consumption of alcohol
* Increased consumption of phytoestrogens
* Increased Body Fat or BMI

Descriptors: Menopause--Physiological aspects; Postmenopausal women--Physiological aspects; Middle aged women--Care and treatment
Geographic Codes/Names: 1USA United States

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?  s au=((bland, J?) or (bland, J.S.) or (bland, J.?))
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           7   AU=BLAND, J.S.
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          883   AU=BLAND, J.?
S6       1322   S AU=((BLAND, J?) OR (BLAND, J.S.) OR (BLAND, J.?))

?  s s6 and isoflavone
         1322   S6
        28691   ISOFLAVONE
S7          3   S S6 AND ISOFLAVONE

?  s s6 and menopause
         1322   S6
       130886   MENOPAUSE
S8         10   S S6 AND MENOPAUSE

?  rd
>>>W:  Duplicate detection is not supported for File 391.
Records from unsupported files will be retained in the RD set.
S9          5   RD  (UNIQUE ITEMS)

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9/2/1 (Item 1 from file: 10)
Fulltext available through: ScienceDirect (Elsevier) USPTO Full Text Retrieval Options SCIENCEDIRECT
AGRICOLA

4387074 43779664 **Holding Library:** AGL
Effect of a low glycemic index diet with soy protein and phytosterols on CVD risk factors in postmenopausal women

Lukaczer, D. Liska, D.J.; Lerman, R.H.; Darland, G.; Schiltz, B.; Tripp, M.; **Bland, J.S.**
Nutrition. 2006 Feb., v. 22, no. 2 p. 104-113.
ISSN: 0899-9007
DNAL Call Number: QP141.A1N866
Language: English

9/2/2 (Item 1 from file: 50)
Fulltext available through: USPTO Full Text Retrieval Options SCIENCEDIRECT ProQuest
CAB Abstracts

0008945640 **CAB Accession Number:** 20053194626
Clinical effects of a proprietary combination isoflavone nutritional supplement in menopausal women: a pilot

trial.

Lukaczer, D.; Darland, G.; Tripp, M.; Liska, D.; Lerman, R. H.; Schiltz, B. ; Bland, J. S.
Functional Medicine Research Center, Gig Harbor, Washington, USA.
Alternative Therapies in Health and Medicine vol. 11 (5): p.60-65
Publication Year: 2005
ISSN: 1078-6791
Publisher: InnoVision Communications Encinitas , USA
Language: English **Record Type:** Abstract
Document Type: Journal article

9/2/3 (Item 1 from file: 91)
MANTIS(TM)

00000031
Evaluation and clinical significance of appendicular skeletal assessment by radiographic photodensitometry
BLAND, J.; BROOKS, D.; KENT, D.; FISHER, W.;
JOURNAL OF MANIPULATIVE AND PHYSIOLOGICAL THERAPEUTICS. April 1989 (19890400), Vol 12, pp 113-9
ISSN: 0161-4754

9/2/4 (Item 1 from file: 149)
TGG Health&Wellness DB(SM)

01207619 **Supplier Number:** 08832393
Coping with menopause. (column)

Bland, Jeffrey S.
Let's Live , v58 , n3 , p82(1)
March ,
1990
Document Type: column **Publication Format:** Magazine/Journal
ISSN: 0024-1288
Language: English
Record Type: Citation **Target Audience:** Consumer

Descriptors: Estrogen--Physiological aspects; Hormone therapy--Physiological aspects; **Menopause**--Drug therapy
File Segment: HI File 149

9/2/5 (Item 1 from file: 399)
CA SEARCH(R)

141400910 **CA:** 141(24)400910a PATENT

Medical composition for balancing bodily processes
Inventor (Author): Bland, Jeffrey S.; Liska, Deann J.; Krumhar, Kim Carleton; Tripp, Matthew L.; Darland, Gary K.; Lerman, Robert H.; Lukaczer, Daniel O.
Location: USA
Patent: U.S. Pat. Appl. Publ. ; US 20040220118 A1 **Date:** 20041104
Application: US 735526 (20031211) *US PV265908 (20010202) *US 56858 (20020123) *US PV352016 (20020125) *US PV432689 (20021211) *US 352388 (20030127)
Pages: 40 pp., Cont.-in-part of U.S. Ser. No. 352,388.
CODEN: USXXCO
Language: English
Patent Classifications:
Class: 514027000; A61K-031/7048A; A61K-031/353B

? TYPE 1207619/full from 149

1207619/9 (Direct type from file: 149)
TGG Health&Wellness DB(SM)

01207619 **Supplier Number:** 08832393
Coping with menopause. (column)

Bland, Jeffrey S.
Let's Live , v58 , n3 , p82(1)
March ,
1990
Document Type: column **Publication Format:** Magazine/Journal
ISSN: 0024-1288
Language: English
Record Type: Citation **Target Audience:** Consumer

Descriptors: Estrogen--Physiological aspects; Hormone therapy--Physiological aspects; Menopause--Drug therapy
File Segment: HI File 149

? TYPE 1207619/AB from 149

1207619/AB (Direct type from file: 149)
TGG Health&Wellness DB(SM)

? s (isoflavone or phytoestrogen) and (curcumin or rosemary or resveratrol or tumeric) and (choline or trimethylglycine or cobalamin or (folic acid) or riboflavin or pyridoxine or magnesium)

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        28691   ISOFLAVONE
        12771   PHYTOESTROGEN
        17993   CURCUMIN
        13190   ROSEMARY
        18468   RESVERATROL
          524   TUMERIC
       269053   CHOLINE
          445   TRIMETHYLGLYCINE
        24508   COBALAMIN
        69935   FOLIC ACID
        60849   RIBOFLAVIN
        53658   PYRIDOXINE
       939916   MAGNESIUM
S10         29   S (ISOFLAVONE OR PHYTOESTROGEN) AND (CURCUMIN OR ROSEMARY OR RESVERATROL
OR TUMERIC) AND (CHOLINE OR TRIMETHYLGLYCINE OR COBALAMIN OR (FOLIC ACID) OR RIBOFLAVIN
OR PYRIDOXINE OR MAGNESIUM)
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>>>W: Duplicate detection is not supported for File 391.

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S11 25 RD (UNIQUE ITEMS)

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Processing

Processing

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S12         14   S S11 AND PY<=2002

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12/2/1 (Item 1 from file: 5)
Fulltext available through: USPTO Full Text Retrieval Options Blackwell Publishing SCIENCEDIRECT
Biosis Previews(R)

0013710843 **Biosis No.:** 200200304354
Prospects for chemoprevention of cancer

Author: Tamimi R M (Reprint); Lagiou P; Adami H-O; Trichopoulos D
Author Address: Epidemiology Department, Harvard School of Public Health, 677 Huntington Ave., Boston, MA, 02115, USA**USA
Journal: Journal of Internal Medicine 251 (4): p 286-300 April, 2002 **2002**
Medium: print
ISSN: 0954-6820
Document Type: Article; Literature Review
Record Type: Abstract
Language: English

12/2/2 (Item 1 from file: 53)
FOODLINE(R): Science

00661139 **Foodline Accession Number:** 486374
FTIR and hyphenated FTIR techniques for the analysis of foods. (b.)

Reedy G T; Mossoba M M
Spectral methods in food analysis: instrumentation and applications. 375-396 (many ref.)
Mossoba M M
Publisher: Marcel Dekker , New York
1998
ISBN Number: 0-8247-0223-9
Classification: 543.42:641
Language: English
Document Type: Book; Book chapter

12/2/3 (Item 1 from file: 73)
Fulltext available through: USPTO Full Text Retrieval Options SCIENCEDIRECT
EMBASE

13435739 **EMBASE No:** 2005449856
Dietary phytochemicals and human health

Oleszek W.
W. Oleszek, Department of Biochemistry, Institute of Soil Science and Plant Cultivation, 24-100 Pulawy Poland
Author Email: wo@iung.pulawy.pl
Phytochemistry Reviews (PHYTOCHEM. REV.) (Netherlands) 2002 , 1/2 (163-166)
CODEN: PRHEB **ISSN:** 1568-7767
Document Type: Journal ; Conference Paper
Language: ENGLISH
Number Of References: 12

12/2/4 (Item 2 from file: 73)
Fulltext available through: USPTO Full Text Retrieval Options SCIENCEDIRECT
EMBASE

13161706 **EMBASE No:** 2005221314
Nutritional issues and supplements in amyotrophic lateral sclerosis and other neurodegenerative disorders

Cameron A.; Rosenfeld J.
Dr. J. Rosenfeld, Carolinas Neuromuscular/ALS Center, 1000 Blythe Boulevard, Charlotte, NC 28203 United States
Author Email: jrosenfeld@carolinas.org
Current Opinion in Clinical Nutrition and Metabolic Care (CURR. OPIN. CLIN. NUTR. METAB. CARE) (United States) 2002 , 5/6 (631-643)
CODEN: COCMF **ISSN:** 1363-1950
Document Type: Journal ; Review
Language: ENGLISH **Summary Language:** ENGLISH
Number Of References: 107

12/2/5 (Item 3 from file: 73)
Fulltext available through: USPTO Full Text Retrieval Options SCIENCEDIRECT
EMBASE

11918373 **EMBASE No:** 2003027446
Micronutrients in cancer chemoprevention

Greenwald P.; Milner J.A.; Anderson D.E.; McDonald S.S.
P. Greenwald, Division of Cancer Prevention, National Cancer Institute, National Institutes of Health, 6130 Executive Boulevard, Bethesda, MD 20892-7309 United States
Author Email: greenwap@mail.nih.gov
Cancer and Metastasis Reviews (CANCER METASTASIS REV.) (Netherlands) 2002 , 21/3-4 (217-230)
CODEN: CMRED **ISSN:** 0167-7659
Document Type: Journal ; Review

Language: ENGLISH **Summary Language:** ENGLISH
Number Of References: 128

12/2/6 (Item 4 from file: 73)
Fulltext available through: USPTO Full Text Retrieval Options SCIENCEDIRECT
EMBASE

11701214 **EMBASE No:** 2002274343
Naturoceutical agents in the management of cardiovascular disease

Hermann D.D.

Dr. D.D. Hermann, Heart Failure/Cardiac Trans. Program, University of California, UCSD Healthcare, San Diego, CA 92103-8411 United States
Author Email: dhermann@ucsd.edu
American Journal of Cardiovascular Drugs (AM. J. CARDIOVASC. DRUGS) (New Zealand) 2002 , 2/3 (173-196)
CODEN: AJCDD **ISSN:** 1175-3277
Document Type: Journal ; Review
Language: ENGLISH **Summary Language:** ENGLISH
Number Of References: 195

12/2/7 (Item 5 from file: 73)
Fulltext available through: BMJ British Medical Journal USPTO Full Text Retrieval Options SCIENCEDIRECT ProQuest
EMBASE

11544534 **EMBASE No:** 2002118135
Science, medicine, and the future: Cancer chemoprevention

Greenwald P.
P. Greenwald, Division of Cancer Prevention, National Cancer Institute, National Institutes of Health, 6130 Executive Boulevard, Bethesda, MD 20892-7309 United States
Author Email: pg37g@nih.gov
British Medical Journal (BR. MED. J.) (United Kingdom) 23 MAR 2002 , 324/7339 (714-718)
CODEN: BMJOA **ISSN:** 0959-8146
Document Type: Journal ; Review
Language: ENGLISH
Number Of References: 27

12/2/8 (Item 6 from file: 73)
Fulltext available through: USPTO Full Text Retrieval Options SCIENCEDIRECT
EMBASE

11522762 **EMBASE No:** 2002093018
New opportunities in chemoprevention research

Kucuk O.
Dr. O. Kucuk, Barbara Ann Karmanos Cancer Inst., Wayne State University, 3990 John R, Detroit, MI 48201 United States
Author Email: kucuko@karmanos.org
Cancer Investigation (CANCER INVEST.) (United States) 2002 , 20/2 (237-245)
CODEN: CINVD **ISSN:** 0735-7907
Document Type: Journal ; Review
Language: ENGLISH **Summary Language:** ENGLISH
Number Of References: 43

12/2/9 (Item 7 from file: 73)

11282966 **EMBASE No:** 2001297694
From carcinogenesis to clinical interventions for cancer prevention

Greenwald P.
P. Greenwald, Division of Cancer Prevention, National Cancer Institute, 6130 Executive Blvd., Bethesda, MD 20892-7309 United States
Author Email: pg37g@nih.gov
Toxicology (TOXICOLOGY) (Ireland) 14 SEP 2001 , 166/1-2 (37-45)
CODEN: TXCYA **ISSN:** 0300-483X
Publisher Item Identifier: S0300483X01004437
Document Type: Journal ; Article
Language: ENGLISH **Summary Language:** ENGLISH
Number Of References: 46

12/2/10 (Item 8 from file: 73)

10552828 **EMBASE No:** 2000017934
Cancer chemopreventionprogress and promise

Kelloff G.J.; Sigman C.C.; Greenwald P.
G.J. Kelloff, Division of Cancer Prevention, National Cancer Institute, 9000 Rockville Pike, Bethesda, MD 20892 United States
Author Email: kelloffg@dcpcepn.nci.nih.gov
European Journal of Cancer (EUR. J. CANCER) (United Kingdom) 1999 , 35/14 (2031-2038)
CODEN: EJCAE **ISSN:** 0959-8049

Publisher Item Identifier: S0959804999002993
Document Type: Journal ; Review
Language: ENGLISH **Summary Language:** ENGLISH
Number Of References: 41

12/2/11 (Item 1 from file: 149)
TGG Health&Wellness DB(SM)

02917718 **Supplier Number:** 74510831 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Natural Agents in the Prevention of Cancer, Part Two: Preclinical Data and Chemoprevention for Common Cancers.

Lamson, Davis W.; Brignall, Matthew S.
Alternative Medicine Review , 6 , 2 , 167
April ,
2001
Publication Format: Magazine/Journal
ISSN: 1089-5159
Language: English
Record Type: Fulltext **Target Audience:** Academic; Professional
Word Count: 11596 **Line Count:** 00984

Descriptors: Alternative medicine--Methods; Cancer--Prevention; Dietary supplements-- Health aspects
Geographic Codes/Names: 1USA United States

12/2/12 (Item 2 from file: 149)
TGG Health&Wellness DB(SM)

02917463 **Supplier Number:** 73838971 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Menopause: A Natural Transition.

Guilliams, Thomas G.
Original Internist , 8 , 1 , 08
March ,
2001
Publication Format: Magazine/Journal
ISSN: 1529-4722
Language: English
Record Type: Fulltext **Target Audience:** Academic; Professional
Word Count: 5911 **Line Count:** 00493

Descriptors: Menopause--Physiological aspects; Postmenopausal women--Physiological aspects; Middle aged women--Care and treatment
Geographic Codes/Names: 1USA United States

12/2/13 (Item 3 from file: 149)
TGG Health&Wellness DB(SM)

02038535 **Supplier Number:** 80120503 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Eat to beat menopause: the right nutrients can help you navigate this passage in time. Get them in our delicious recipes.(Recipe)

Bass, Judy
Natural Health , 31 , 8 , 80(7)
Oct-Nov ,
2001
Document Type: Recipe **Publication Format:** Magazine/Journal
ISSN: 1067-9588
Language: English
Record Type: Fulltext **Target Audience:** Consumer
Word Count: 1933 **Line Count:** 00232

Descriptors: Menopause--Health aspects; Food habits--Health aspects; Women--Food and nutrition; Cookery (Oat bran)--Menus and recipes; Cookery (Beans)--Menus and recipes; Cookery (Cabbage)--Manufacture
Geographic Codes/Names: 1USA United States
File Segment: HI File 149

12/2/14 (Item 1 from file: 45)
EMCare

00776484 EMCare No: 30397400
Resveratrol attenuates ovariectomy-induced hypertension and bone loss in stroke-prone spontaneously hypertensive rats

Mizutani K.; Ikeda K.; Kawai Y.; Yamori Y.
K. Mizutani, Graduate Sch. of Human/Envtl. Stud., Kyoto University, Kyoto 606-8501 Japan
Journal of Nutritional Science and Vitaminology (J. NUTR. SCI. VITAMINOL.) (Japan) 2000 , 46/2 (78-83)
CODEN: JNSVA **ISSN:** 0301-4800
DOCUMENT TYPE: Journal ; Article
LANGUAGE: ENGLISH **SUMMARY LANGUAGE:** ENGLISH
NUMBER OF REFERENCES: 49
RECORD TYPE: Abstract

? TYPE 776484/full from 45

776484/9 (Direct type from file: 45)
EMCare

00776484 EMCare No: 30397400

Resveratrol attenuates ovariectomy-induced hypertension and bone loss in stroke-prone spontaneously hypertensive rats

Mizutani K.; Ikeda K.; Kawai Y.; Yamori Y.
K. Mizutani, Graduate Sch. of Human/Envtl. Stud., Kyoto University, Kyoto 606-8501 Japan
Journal of Nutritional Science and Vitaminology (J. NUTR. SCI. VITAMINOL.) (Japan) 2000 , 46/2 (78-83)
CODEN: JNSVA **ISSN:** 0301-4800
DOCUMENT TYPE: Journal ; Article
LANGUAGE: ENGLISH **SUMMARY LANGUAGE:** ENGLISH
NUMBER OF REFERENCES: 49
RECORD TYPE: Abstract

We examined the effect of resveratrol (3,4',5-trihydroxy stilbene), a phenolic compound found in the skins of most grapes, on blood pressure and bone loss in ovariectomized (OVX), stroke-prone spontaneously hypertensive rats (SHRSP). Nineteen-week-old female SHRSP were divided into a sham- ovariectomized (sham) group fed a control diet and two OVX groups fed either a control diet (OVX-Cont) or a diet supplemented with resveratrol (5 mg/kg per d; OVX-Resv). Ovariectomy induced significant increases in systolic blood pressure (SBP). Resveratrol lowered the SBP by 15% by the third week of administration, and this effect was maintained throughout the study. Resveratrol treatment also significantly enhanced endothelium-dependent vascular relaxation in response to acetylcholine (ACh) in OVX rats. Finally, femur breaking energies measured for the resveratrol-treated (OVX-Resv) group were significantly higher than those of the resveratrol-untreated (OVX-Cont) group. While no significant differences in calcium, magnesium and phosphorus content were found between the femurs of OVX-Cont and OVX-Resv rats, the femur hydroxyproline content in the OVX-Resv group was significantly higher than of the OVX-Cont group. We conclude that, in OVX-SHRSP, resveratrol acts by a similar mechanism to mammalian estrogens, lowering blood pressure by increasing dilatory responses to ACh. The present study also demonstrated that resveratrol was able to prevent ovariectomy-induced decreases in femoral bone strength.

DESCRIPTORS:
* resveratrol; *phytoestrogen; *osteoporosis; *ovariectomy; *spontaneously hypertensive rat; *stroke; *hypertension; *osteolysis
metronidazole; estrogen; phosphorus; calcium; acetylcholine; magnesium; hydroxyproline; nitric oxide; stilbene; phenol derivative; femur; diet; rat ; systolic blood pressure; female; blood pressure; venous pressure; grape; animal model; bone strength; diet supplementation; postmenopause osteoporosis; estrogen activity; heart weight; postmenopause; nonhuman; vasodilatation; vascular endothelium; thoracic aorta; animal experiment; controlled study; antihypertensive activity; brain weight; animal tissue; endothelium; mammal; skin

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